Station Access and Modal Interface Report
Honolulu High-Capacity Transit Corridor Project
Final

August 2011

Prepared for:
City and County of Honolulu

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'Ewa—Toward the west; also called the Wai`anae direction.

ADA—Americans with Disabilities Act of 1990. Title II of ADA requires all public entities (including public transit) at the local and state level to provide access to all programs and services offered by an entity that might be inaccessible to persons with physical disabilities. These include elevators, wheelchair ramps, platforms and/or lifts, and TheHandi-Van.

Center platform—A boarding and alighting area located between two tracks that provides passengers with access to trains traveling in both directions.

Concourse—A walkway (usually overhead) providing bicycle and pedestrian access between station entrances/exits and station platforms where passengers board and disembark trains.

HDOT—The Hawai'i Department of Transportation, which oversees the Interstate Highway System in O'ahu, as well as State highways across the islands.

Kiss-and-ride—A dedicated area located in front of or adjacent to station entrances/exits were passengers can be picked up and dropped off by private vehicles. The term first appeared in the 1950s and is derived from the concept of wives dropping off their husband each morning and kissing them goodbye. Short-term parking areas adjacent to loading zones and attached to park-and-ride facilities are usually provided.

Koko Head—Toward the east; east direction.

Kroc Community Center—The Salvation Army Kroc Center in Kapolei, which will be located on 12 acres and will be the largest community center in Hawai'i. It will contain swimming pools, basketball courts, a performing arts center, and educational facilities. It is expected to open sometime in 2011 or 2012.

Layover position—A dedicated space, typically at the far end of the station entrance/exit area where city transit buses originating and terminating at project stations can pause for breaks between runs.

Line of sight—A straight line on which an observer has a clear, unobstructed view.

Makai—Toward the sea, generally south in the study area.

Mauka—Toward the mountains, generally north in the study area.

Mixed use—The practice of allowing more than one type of use in a single building or collection of buildings. Mixed-use development often combines residential, retail-commercial, and office uses, with commercial uses typically located in ground level storefronts. Mixed use development promotes walkability by shortening the distance between various activities (e.g., living accommodations, shopping, entertainment, medical and business services) and by reducing or eliminating the need to use a car internally.

Modal interface—The relationship between a main transportation mode, such as the Project and supplemental modes used by passengers to access project stations, including walking, cycling, park-and-ride, and TheBus. Modal interface also involves the types of land uses surrounding the Project and the way in which they complement it.

Multi-use trail—A right-of-way (either paved or unpaved) intended for shared use by bicycles and pedestrians. Activities on multi-use trails may include walking, running, hiking, cycling and—if paved—inline skating, scootering, and Segwaying.

Neo-traditional Neighborhood Planning–A type of planning that attempts to reduce traffic and eliminate sprawl by returning to the finer scale and walkability of urban and suburban neighborhoods built before the dominance of automobiles following World War II.

Park-and-Ride—A parking facility (either a surface lot or garage) at the station where passengers can park their personal vehicles on an hourly, daily, or longer-term basis and use public transit for the rest of their trip. Park-and-ride facilities are generally used by those wishing to access the city center from more suburban areas.

Peak period—The period of time on any given day with greatest traffic or passenger volume on a transportation facility. On weekdays, there are typically two peak periods which occur 6–9 a.m. and 3–6 p.m.

Pedestrian refuge island—A safe waiting place in the middle of a wide, busy street or high-speed channelized turning lane where pedestrians can pause as they are attempting to cross.

Position—A dedicated parking space for short, medium, or long-term use that is sized to accommodate one of a typical vehicle type (such as a city bus, paratransit vehicle, taxicab, private auto, or bicycle) while allowing for free, unconstrained in and out movement of that vehicle, as well as the unconstrained movement of other vehicles around it.

Section 106—Commonly called the Section 106 process, Section 106 of the National Historic Preservation Act of 1966 (16 USC 470) requires projects which include federal participation to examine potential impacts on any properties listed, or eligible for listing, on the National Register of Historic Places. Archeological sites are also protected under the National Historic Preservation Act. The Section 106 process is applied in a similar manner when a project involves any kind of excavation.

Station plaza—A ground-level gateway between station entrances/exits and the surrounding community. This area can include many amenities, including bicycle racks, benches, landscaping, sculptures, and public artwork.

Travel demand forecasting model—A model used by transportation planners and engineers to predict future use (usually in terms of traffic or passenger volume) on an existing or planned transportation facility. The model allows decision-makers to weigh the various travel impacts in an urban area resulting from a policy or program, such as the Project.

Zoning—A land use planning technique commonly used by local governments for designating permitted uses of land (including use type, building height, and lot coverage) based on mapped zones.

Introduction

This **Station Access and Modal Interface Report** is a tool to help guide the station design and planning for the Honolulu High-Capacity Transit Corridor Project (Project). The report documents the modal access and interface needs (i.e., needed connections between the Project and surrounding transportation and land use) of each of the 21 project stations, including estimated demand by mode and facility requirements. Information is based on the Final Environmental Impact Statement (EIS) and Record of Decision (ROD). Each individual station interface report includes the following elements:

- Discussion of station access and modal requirements
- Station Area Zoning Map
- Station Area Land Use Map
- Station Area Pedestrian Access Map
- Station Area Bicycle Access Map
- Station Area Bus Routes in 2030

Several factors helped determine the design and location of access elements at stations. These factors include:

- Estimated daily and peak period ridership at each station by access mode (pedestrian and bicycle, bus, kiss-and-ride, other)
- Ability to provide space needed for regional access facilities (e.g., park-and-ride, bus transit center)
- Connections to/from nearby neighborhoods and destinations
- Current and projected land use and zoning in station area
- Natural and man-made site constraints and other barriers to access
- Design features at each station that will influence access (e.g., number and location of entrances)
- Current and planned public facilities that could influence access (e.g., bike/pedestrian trails in the station area)

While stations are planned and designed to accommodate several access modes, the emphasis is placed on walk and bike access. Ultimately, no matter how they get there, everyone eventually walks (or rolls in a wheelchair or stroller) into the station. This emphasis on non-motorized access includes internal circulation/connections between the various station elements, such as entrances, on-street bus stops, off-street bus transit centers, and park-and-ride lots, as well as links to the station from the surrounding community.

Best Practices

Best practices of station interface and access planning are intended to help guide the design and implementation of the Project in a manner that helps maximize its effectiveness as an investment in the movement of people and community building. These best practices are recommendations and have been used in other applications relating to this and other rail projects. The seven key best practices that were considered in station access planning are as follows:

Station as the heart of the community

Memorable transit stations can serve as local landmarks and provide a sense of civic identity. Stations should be designed to create a new "front door" to the community and may serve as a local landmark and gathering place.

Connect neighborhoods with transit

Stations are linked together along the transit line to create a more cohesive, less car-dependent community, and stations are connected to the surrounding community with a complete street, bus, bicycle, and pedestrian network.

Create a pedestrian environment

All transit riders are pedestrians at some point in their trip, and station areas must give them top priority in terms of safety, experience, and convenience. The station area should contain lively, safe, and convenient sidewalks and paths connecting stations to homes, jobs, schools, parks, and shopping.

Tame traffic

Motor vehicles must "behave" in station areas; streets, parking lots, and loading zones must be designed so that traffic operates at speeds and in a manner compatible with a pedestrian-focused environment.

Balance parking

Parking facilities should not separate transit from the surrounding community and, if properly designed and located, can help support the success of station area development.

Create partnerships

In return for the public investment made in transit improvements, local partnerships can help maintain success of the transit system and the communities it serves.

Complement community objectives
When properly planned and designed, transit stations help leverage and support the development vision and economic vitality of the communities they serve.

The features identified in this report reflect estimated ridership and other factors that can influence station access. Final decisions on the type, location, and characteristics of station access features may be altered to comply with environmental regulations or other conditions that apply to the station area.

Major Elements of the Station Access and Modal Interface Report

The report includes details on access and interface that are unique to each station, including bicycle and pedestrian connections, park-and-ride, and surrounding land uses and zoning. A general description of the station details are provided in the following sections:

Site considerations and access
The section describes the context of the station location in relation to the nearby community. Current and projected zoning is presented along with factors influencing potential access for pedestrians, bicyclists, and bus riders. This section also provides an overview of modal access that is anticipated for the respective station. An exhibit is provided which shows the station area site plan, including locations of various access facilities and station entrance locations.

Station access demand and site requirements
Using the travel demand forecasting model, information is presented on the breakdown of daily ridership at each station by mode of access. Based on these ridership estimates and other factors, an estimate of site requirements in the station area is presented. This information includes:

- Number of loading and layover bus positions, both on- and off-street
- Vehicle parking spaces, which could include park-and-ride, short-term kiss-and-ride parking (waiting), and kiss-and-ride loading zones (drop-off)
- TheHandi-Van loading zone positions
- Taxi positions
- Tour bus/private shuttle positions
- Supervisor car positions
- Bicycle parking with a minimum of 20 spaces in bike racks at each station. To accommodate future needs, the access report identifies enough bike parking spaces to meet one percent of estimated 2030 station demand.

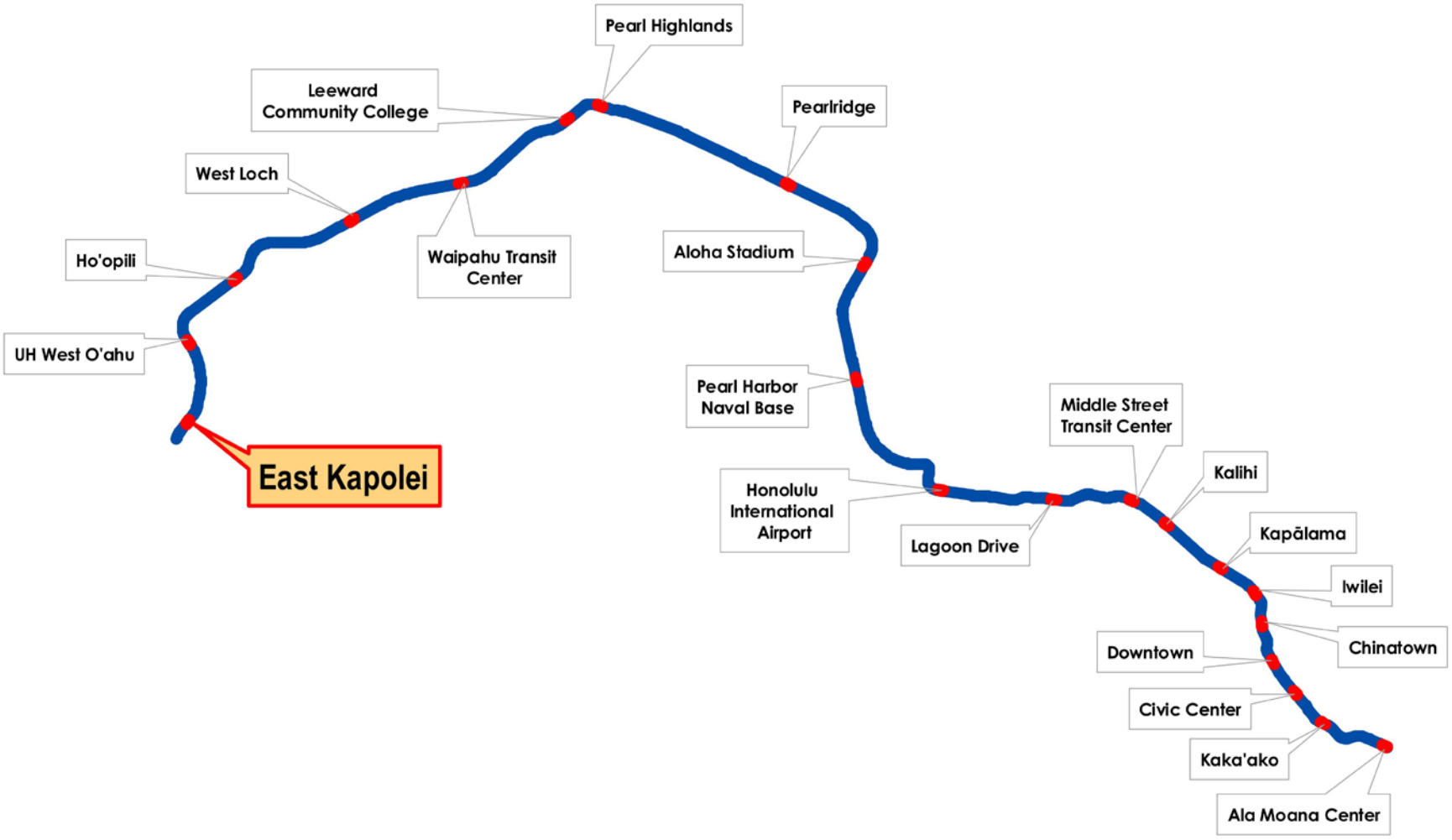
It should be noted that, except for TheHandi-Van and bicycle parking, not all stations will have facilities to accommodate all potential modes. For example, most stations will not have tour bus/private shuttle or park-and-ride lots. In addition to the number of access facilities needed to support station demand, this section describes recommended characteristics of each access facility.

Station site design issues
The report concludes with a description of emphasis areas relating to access design, including potential issues that should be recognized. The section also identifies follow-up action items that designers should take regarding potential access issues. For example, at some stations, access requirements by mode can be addressed by the acquisition of off-street right-of-way that is planned to be acquired as part of the Project. Coordination of features, such as location and layouts of these facilities at an early stage of design, can help achieve effective station access.

It should be noted that this report is based on information in the Final EIS and ROD. Station interface and access issues raised since the ROD will be dealt with on an individual basis in final design.

Future Extensions
Future extensions to the Project may affect park-and-ride and bus access demand requirements at some project stations, particularly those located at or near the Project termini. Over the longer term, demand for feeder bus routes, park-and-ride, taxi service, TheHandi-Van, and bicycle parking at East Kapolei Station and Ala Moana Station could diminish or shift to extension stations. Changes in access requirements at project stations where demand is substantially affected by future extensions will be documented in updated Station Access and Modal Interface reports (as part of the environmental review process to be conducted for each extension).

East Kapolei Station (EK)



Summary
The East Kapolei Station is the west terminus of the initial 20-mile rail project. While the station area is mostly rural/agricultural today, land use is expected to change significantly in the future to become more urban/suburban with a mix of residential, commercial and institutional land uses.

Site Considerations and Access

Station location and nearby land uses

Maps showing current station area land use and zoning are included in this report.

- The new UH West O'ahu campus is about one-half mile mauka of the station and will have over 7,500 students at build-out.
- The adjacent 120,000-square-foot Kroc Community Center will serve 2,000 student-age children as well as adults.
- The station is somewhat isolated between Kualaka'i Parkway and a drainage channel, with entrances on either side of the road.

Pedestrians and bicycles

- Station area pedestrian and bike access are shown on the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- Pedestrians will approach the station from either side of Kualaka'i Parkway and will use the concourse, an overhead walkway from the station entrance on the opposite mauka side of Kualaka'i Parkway, to reach the desired platform.
- Station plazas and sidewalks included in the design will connect to existing and future bike trails.
- The Kroc Center, existing suburban development, DHHL housing, planned mid-density TOD around the station, and the 900 space park-and-ride lot will bring many pedestrians to Kualaka'i Parkway in the vicinity of the station entrances.
- Bicycle parking will be provided at each entrance, with room allocated for more in the future.

TheBus and TheHandi-Van

- Maps showing bus routes that will serve the station are included in the Transit Access Map.
- Transfers to/from buses will take place at on-street bus zones with pullouts along Kualaka'i Parkway and East-West Road.
- TheHandi-Van loading zone will be on East-West Road (see Station Area Site Plan) adjacent to the station entrance.

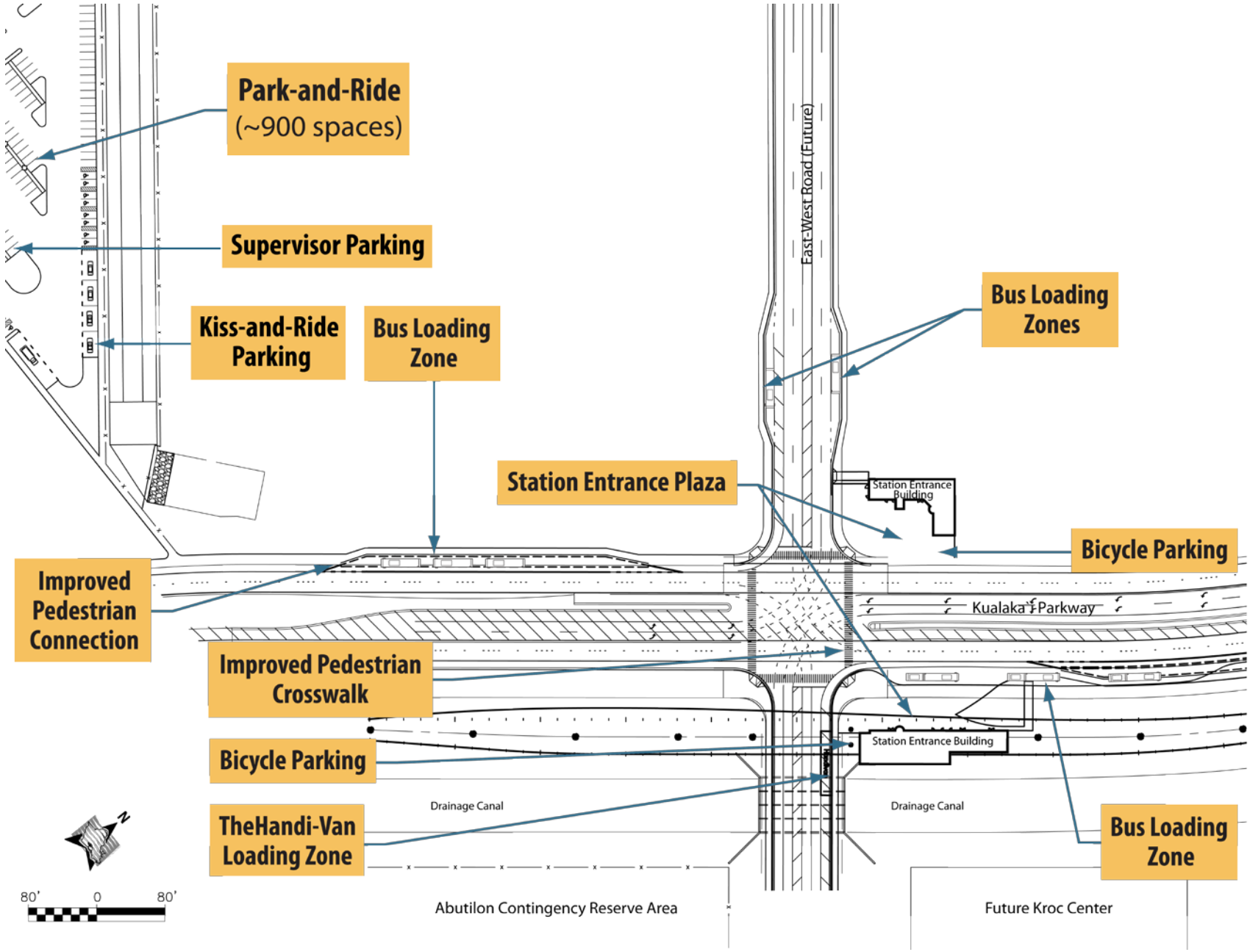
Kiss-and-ride and taxi

- Active loading zones for kiss-and-ride patrons and taxis will be incorporated into the park-and-ride lot.
- Short-term parking for kiss-and-ride patrons will be provided in the park-and-ride lot.

Park-and-ride

- A temporary 900-space surface park-and-ride lot will be located near the mauka station entrance. It will eventually be incorporated into a development project or removed when the extension to West Kapolei is built.
- Access to the park-and-ride lot will be from secondary streets off East-West Road.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent tables provide an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

East Kapolei station will experience a medium level of daily trips, many of which will arrive by bus. The station will have a **Center Platform** accessible from two entrances—one on either side of Kualaka'i Parkway and connected by an overhead pedestrian concourse.

As shown in the table, **TheBus** will be the dominant access mode at this station, serving about 70 percent of passengers. The bus shelters and other elements will be located near the rail station and designed to blend in with the station, making transfers as smooth and easy as possible.

Pedestrian/Bicycle access will include people from the Kroc Center and UH West O'ahu. Bike racks will be provided at each station entrance and space preserved for future demand. More racks or lockers will be added as needed.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions		**Other Vehicle Parking**	
45' Bus Loading Zone	0	Park-and-ride	900
60' Bus Loading Zone	0	Kiss-and-ride	15
Layover	0	Kiss-and-ride loading/unloading	2
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	2
Eastbound	1	Tour bus/private shuttle	0
Westbound	1	Supervisor	1
Northbound	3	Bicycle parking (opening/2030)	20/70
Southbound	3		

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	1,550
Alightings	320

Access Mode Daily Trips	
Walk/bike	420
Bus	5,040
Park-and-ride	1,430
Kiss-and-ride	380
Other	0
Total	7,270

The **Park-and-Ride** lot will serve regional trips coming from Kapolei. Access to the lot will be from East-West Road. This temporary park-and-ride will be provided to meet interim demand from the areas 'Ewa of East Kapolei that may be served in the future by a possible extension of the Project to West Kapolei. A **Kiss-and-Ride** loading zone and short-term parking spaces for those waiting to pick up passengers will be provided within the Park-and-Ride.

Station Site Design Issues

Create comfortable station entrance and bus waiting plazas

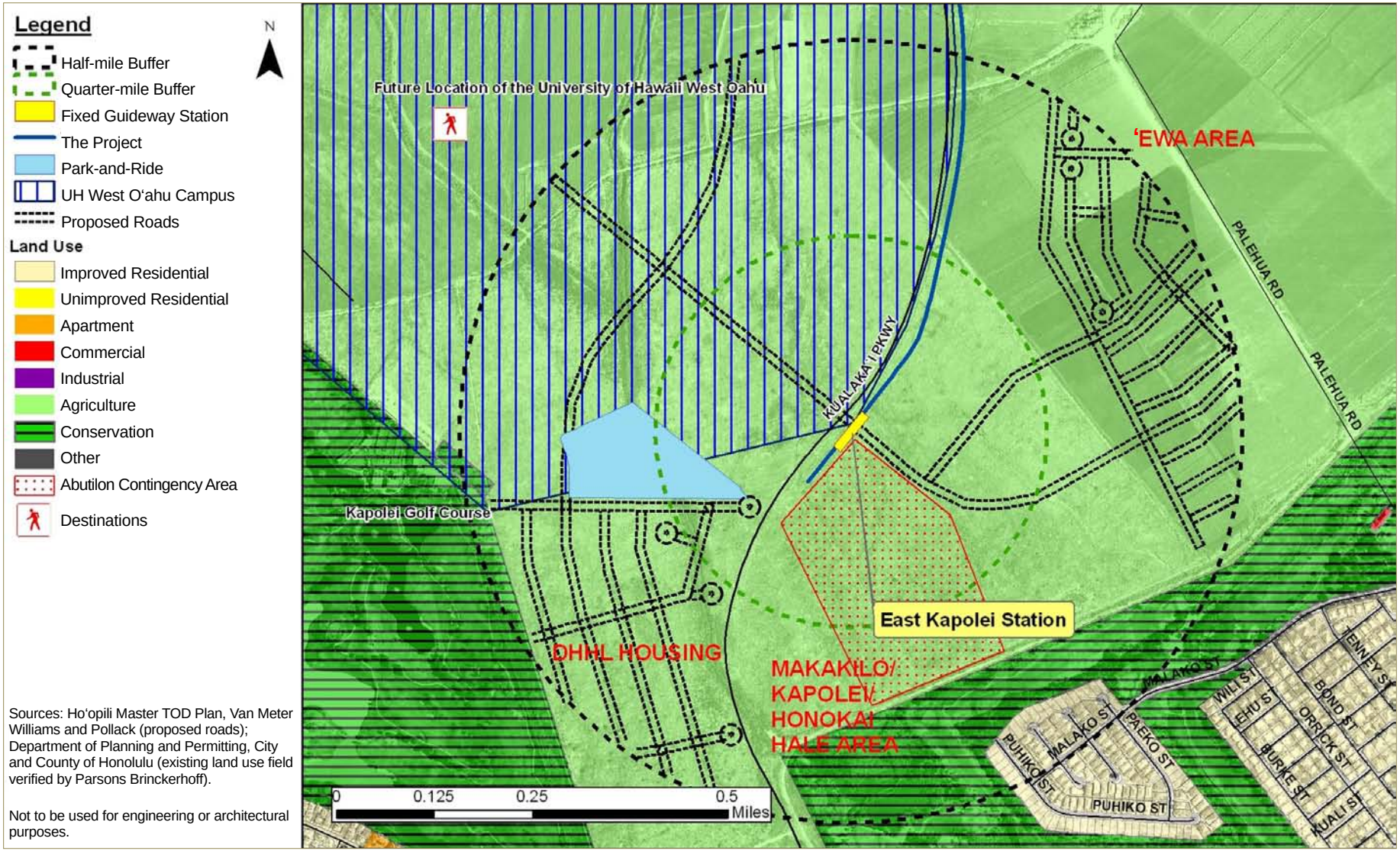
Bus zones will be located on-street to speed transfers (on Kualaka'i Parkway and East-West Road, as shown on the site plan). Station entrance plazas will be designed to provide highly visible, well-lit, active "front doors" for the station; visible secure spaces for bicycle parking; and efficient, safe, and ADA-accessible connections between the station entrances, buses, and nearby developments.

The plaza on the mauka (southbound) side of Kualaka'i Parkway will accommodate patrons transferring to buses, especially during the afternoon rush hours. The makai (northbound) bus stops should be located as close as possible to the station entrance to minimize walk distance and connection time. There should be a clear line of sight between the station entrances, bus loading zones, kiss-and-ride loading zones, and park-and-ride lot.

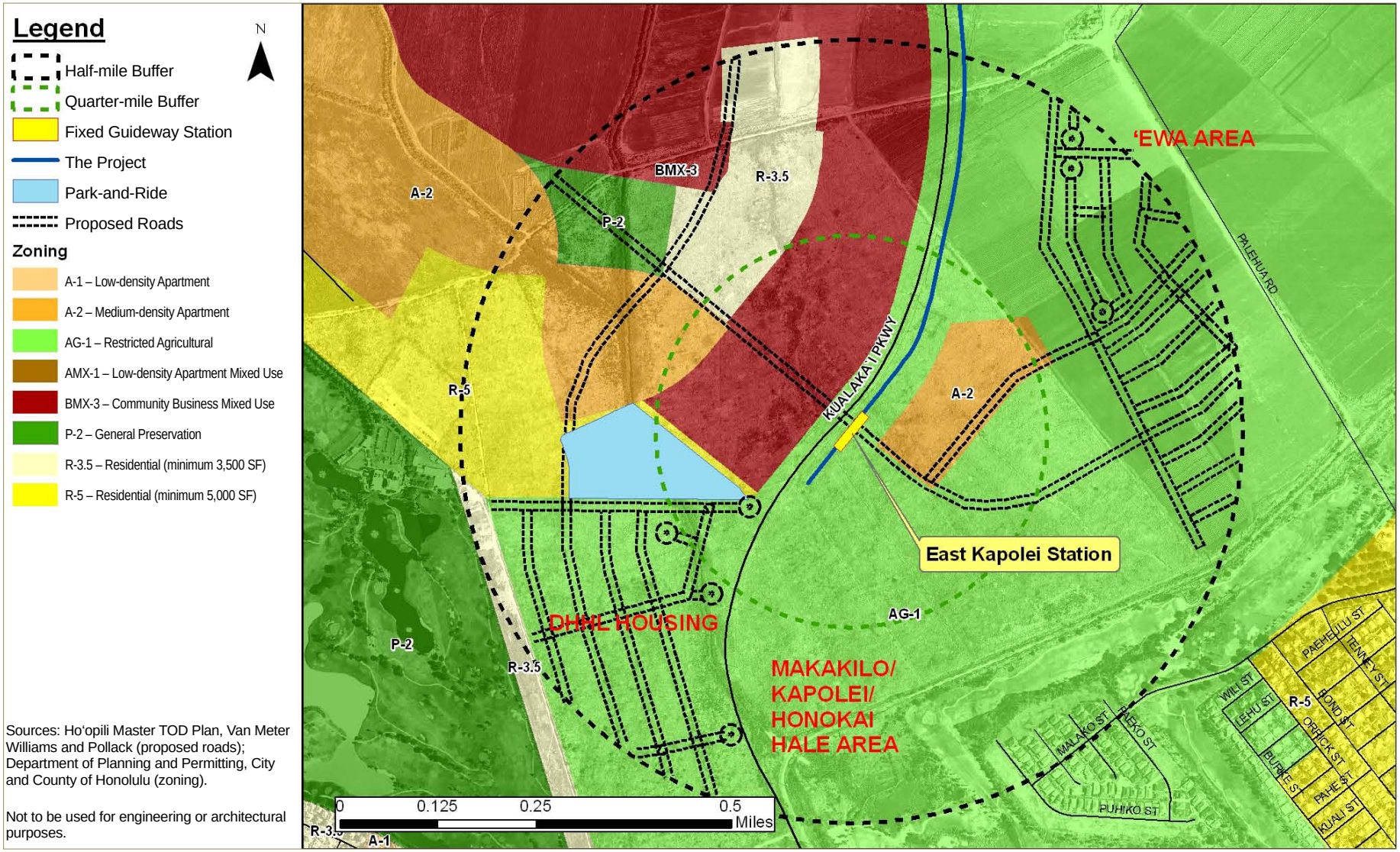
Coordination and Other Considerations

HART staff will need to work with HDOT to locate the bus loading zones close to the station entrances. HART will need to work with UH West O'ahu to locate, size and design the temporary park-and-ride lot. Improved pedestrian connections should be included in the Project, such as widening existing crosswalks or adding additional crosswalks. A pedestrian refuge island should also be considered halfway across Kualaka'i Parkway to help create a more-pedestrian friendly environment.

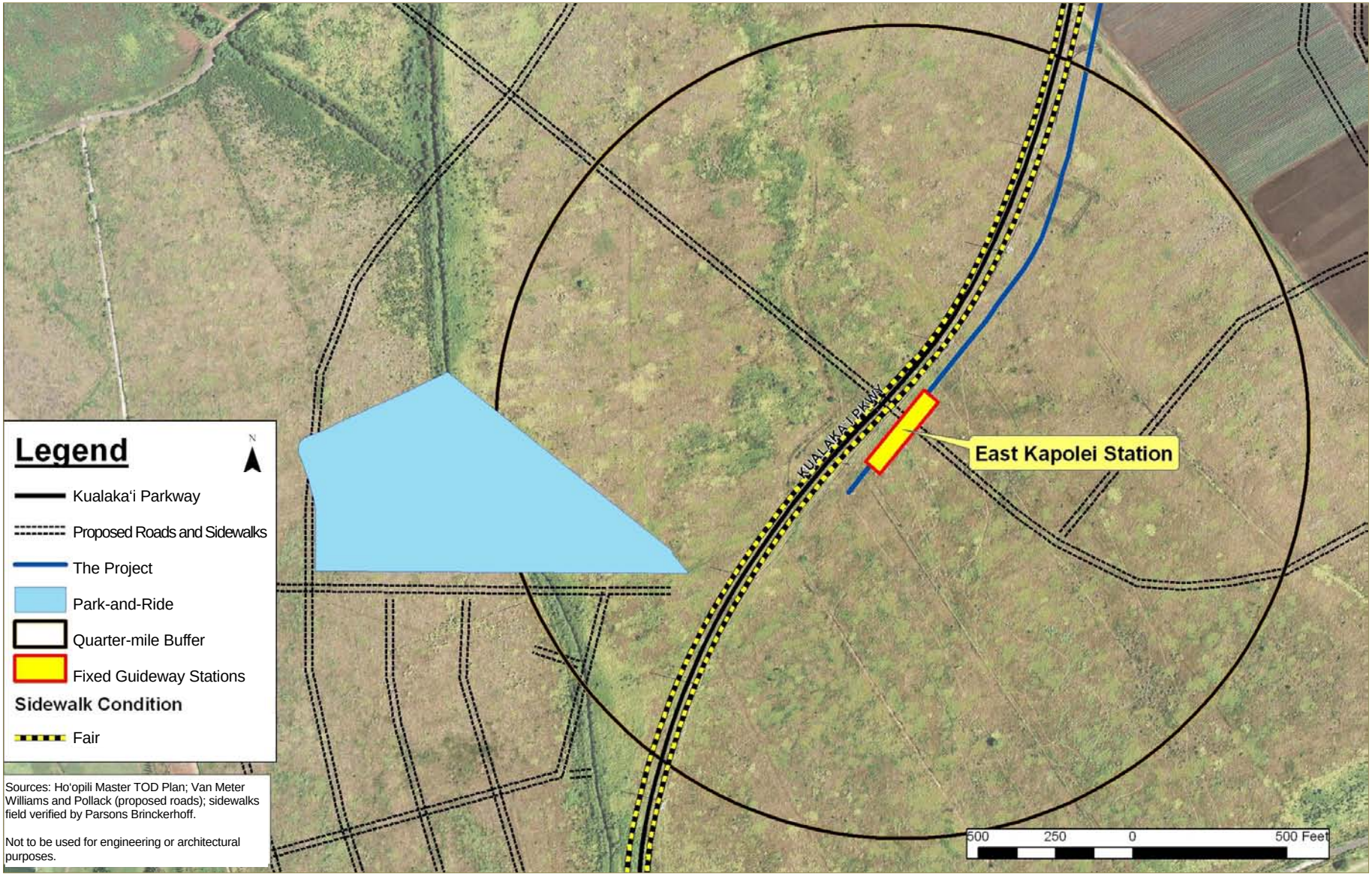
East Kapolei Station—Existing Land Use



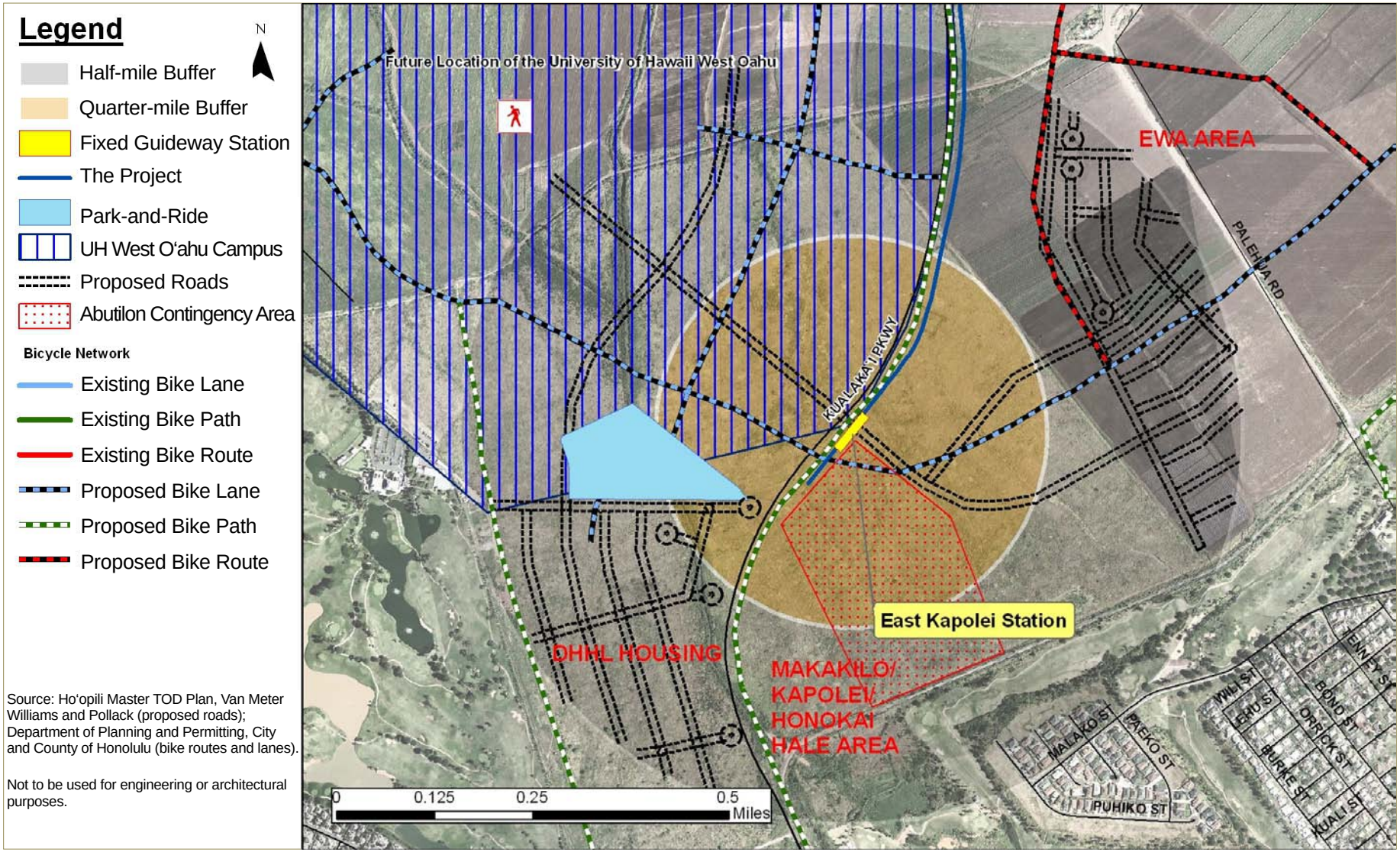
East Kapolei Station—Existing Zoning

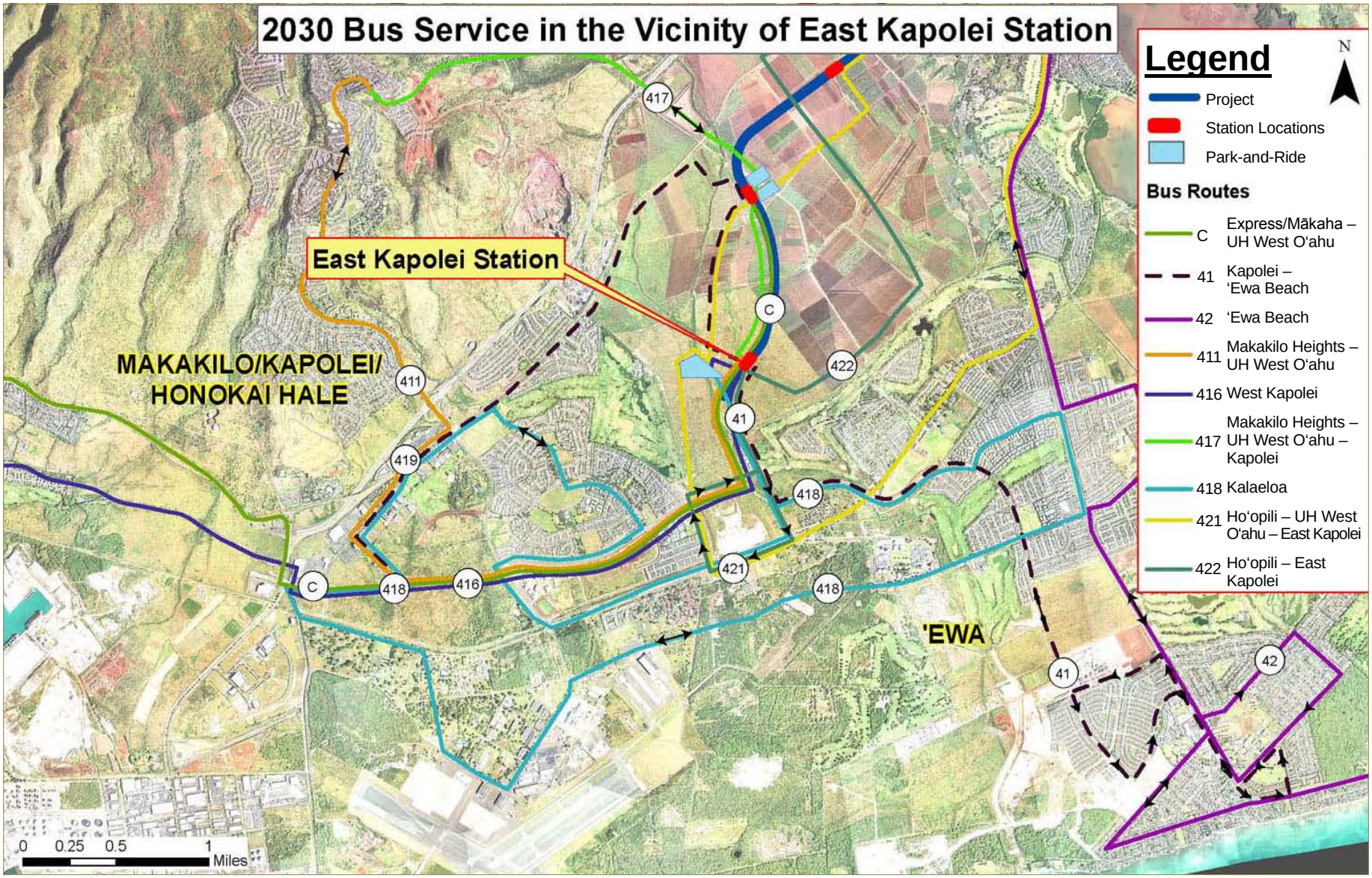


East Kapolei Station—Pedestrian Access

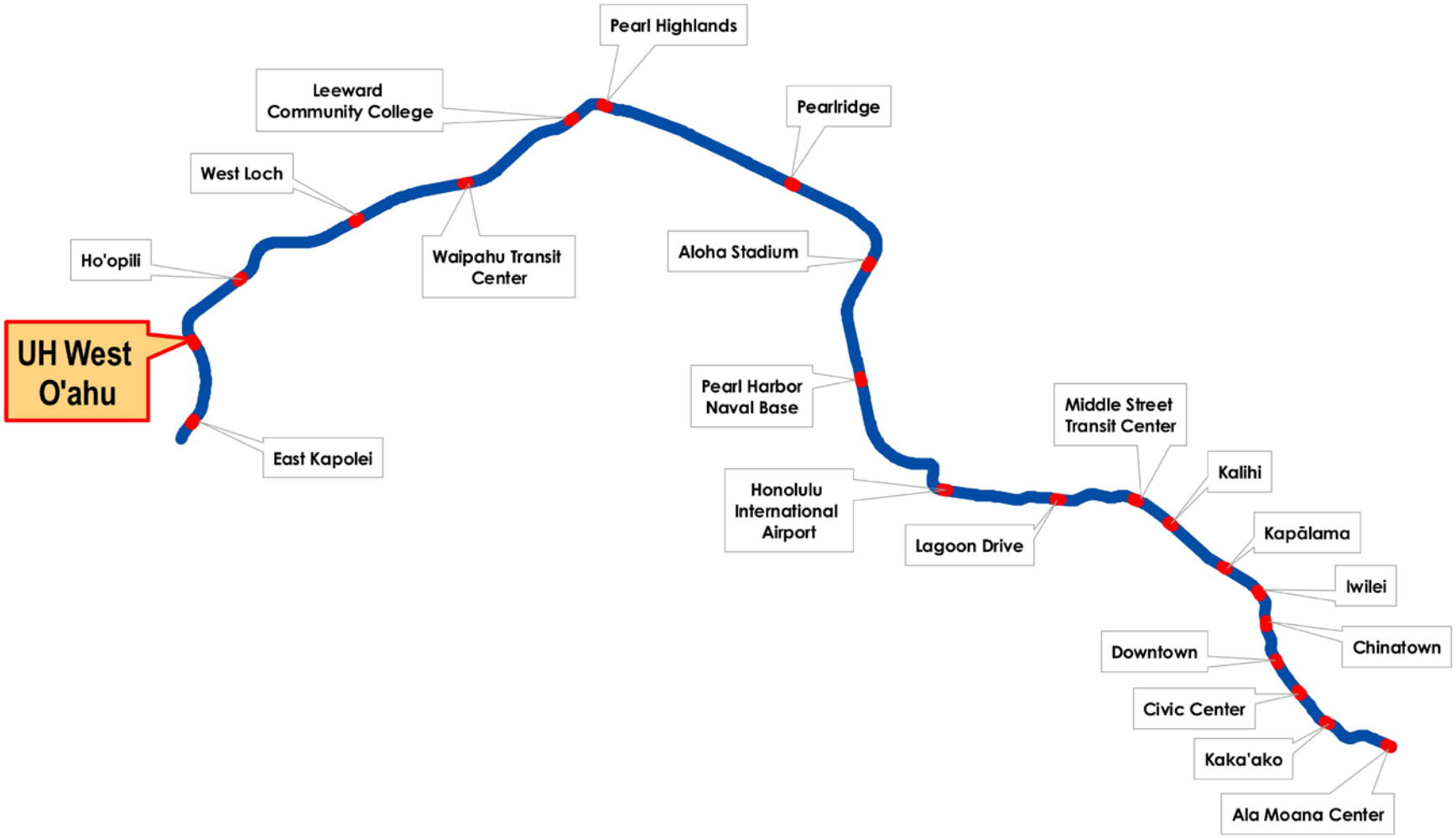


East Kapolei Station—Bicycle Access




2030 Bus Service in the Vicinity of East Kapolei Station
East Kapolei Station
MAKAKILO/KAPOLEI/
HONOKAI HALE
'EWA
Legend
N
Project
Station Locations
Park-and-Ride
Bus Routes
C Express/Mākaha – UH West O'ahu
41 Kapolei – 'Ewa Beach
42 'Ewa Beach
411 Makakilo Heights – UH West O'ahu
416 West Kapolei
417 Makakilo Heights – UH West O'ahu – Kapolei
418 Kalaeloa
421 Ho'opili – UH West O'ahu – East Kapolei
422 Ho'opili – East Kapolei
0 0.25 0.5 1 Miles

UH West O‘ahu Station (UW)



Summary

The University of Hawai‘i at West O‘ahu (UH West O‘ahu) Station will be located Koko Head of Kualaka‘i Parkway at the intersection with the future Campus Access Road. Entrances for the station will be located on either side of Kualaka‘i Parkway.

Site Considerations and Access

Station location and nearby land use

- Maps showing station area land use and zoning are included in this report. While mostly rural/ agricultural today, land use will change significantly in the future to become more residential, commercial and institutional.
- Future UH West O‘ahu campus will be located approximately 1/4 mile west of the station entrance.
- Potential access and development in the station area is influenced by Kualaka‘i Parkway and the Kalo‘i drainage channel.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown in the station area site plan to the right and in the Pedestrian and Bicycle Access maps on the following pages.
- Pedestrians will approach the station from nearby streets and a future multi-use trail adjacent to the Kalo‘i drainage channel.
- Access to the station will be supported by connections to future bike trails and sidewalk network.
- Proximity of the future campus and mixed-use developments will generate a high number of walk and bicycle trips.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report (see Transit Access map).
- Transfers to/from buses will take place at an off-street transit center near the makai station entrance (see Station Area Site Plan)
- TheHandi-Van loading zones will be in the transit center near the makai station entrance (see Station Area Site Plan).

Kiss-and-ride and taxi

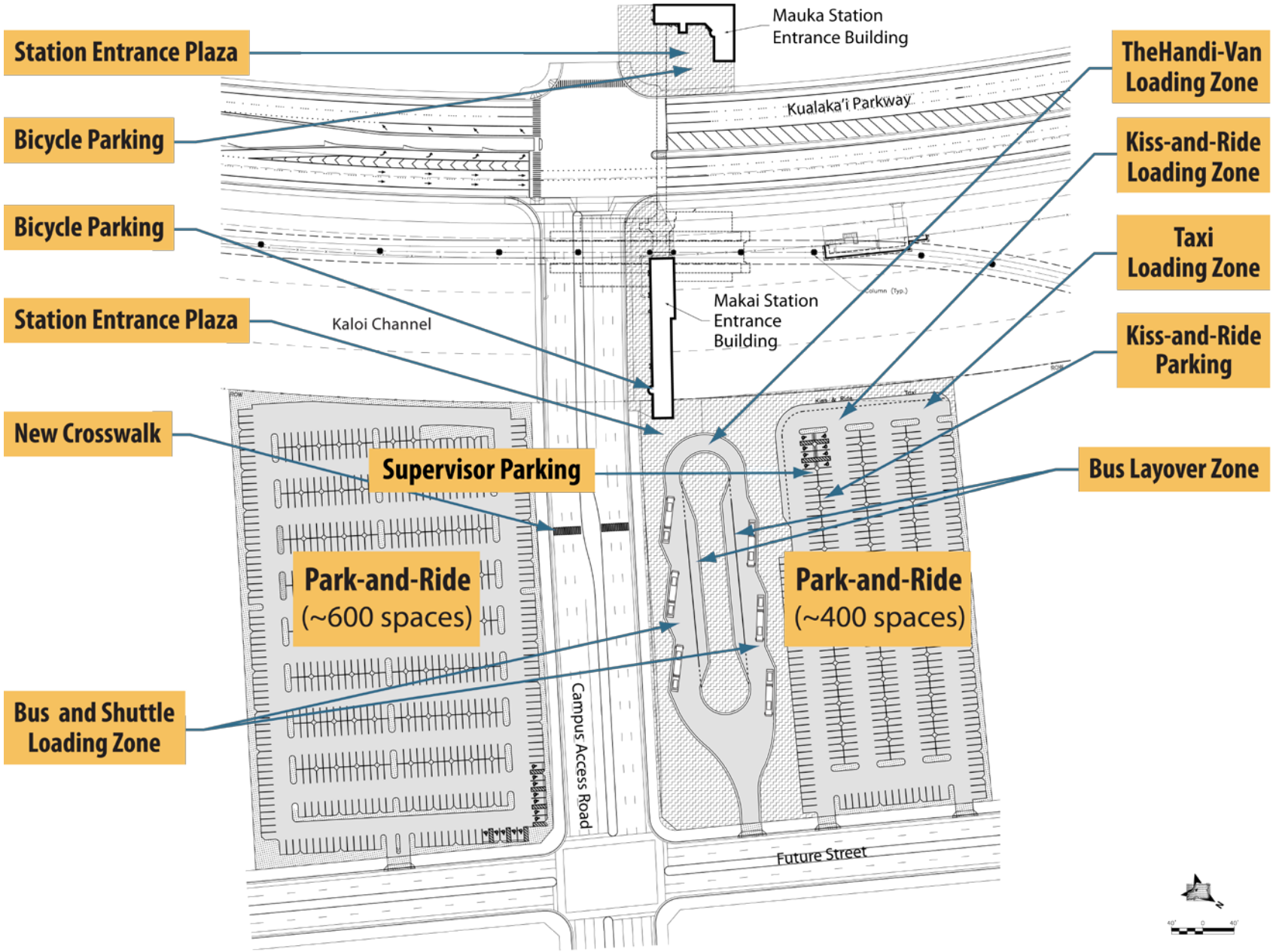
- Active loading zones for kiss-and-ride patrons and taxis, as well as short-term parking for kiss-and-ride patrons, will be incorporated into the park-and-ride lot nearest the station entrance.

Park-and-ride

- Two surface lots located on Campus Access Road will provide approximately 1,000 spaces.

Auto access to the park-and-ride facilities will be from a new road off Campus Access Road (no direct access from Campus Access Road).

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

UH West O‘ahu station will experience a medium level of daily passenger traffic. Most of the passengers will arrive by bus. The station will have **Side Platforms** accessible from two entrances—one on either side of Kualaka‘i Parkway and connected by an overhead concourse.

TheBus is the dominant access mode serving about three-quarters of station demand. The bus shelters and other elements at the off-street transit center should be designed to blend in with the rail station. Transfers between bus and rail should be easy, safe, and as direct as possible.

Pedestrian/Bicycle access will come from surrounding neighborhoods and destinations and will include many students, faculty, and staff of UH West O‘ahu. Bike racks will be provided at each station entrance and space should be preserved for future demand. More racks or lockers should be added as needed. A new crosswalk across Campus Access Road will be needed to provide safe access to the makai park-and-ride lot.

The **Park-and-Ride** lots will serve regional trips coming from ‘Ewa Beach, the Fort Weaver Road area, and other parts of Kapolei. Access to the lots will be from a new road off Campus Access Road. Cars will be kept separate from buses using the transit center. A **Kiss-and-Ride** loading zone and 15 short-term parking spaces will be provided for those waiting to pick up passengers.

Site Requirements in Station Area*			
On-Site *(off-street)*			
Bus Positions		**Other Vehicle Parking**	
45’ Bus Loading Zone	2	Park-and-ride	1,000
60’ Bus Loading Zone	4	Kiss-and-ride	10
Layover	4	Kiss-and-ride loading/unloading	1
Off-Site *(on-street)*		TheHandi-Van	1
Bus Positions		Taxi	2
Eastbound	0	Tour bus/private shuttle	2
Westbound	0	Supervisor	1
Northbound	0	Bicycle parking (opening/2030)	20/60
Southbound	0		

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	1,590
Alightings	230

Access Mode Daily Trips	
Walk/bike	550
Bus	4,750
Park-and-ride	680
Kiss-and-ride	260
Other	0
Total	6,240

Station Site Design Issues

Create comfortable station entrance plazas

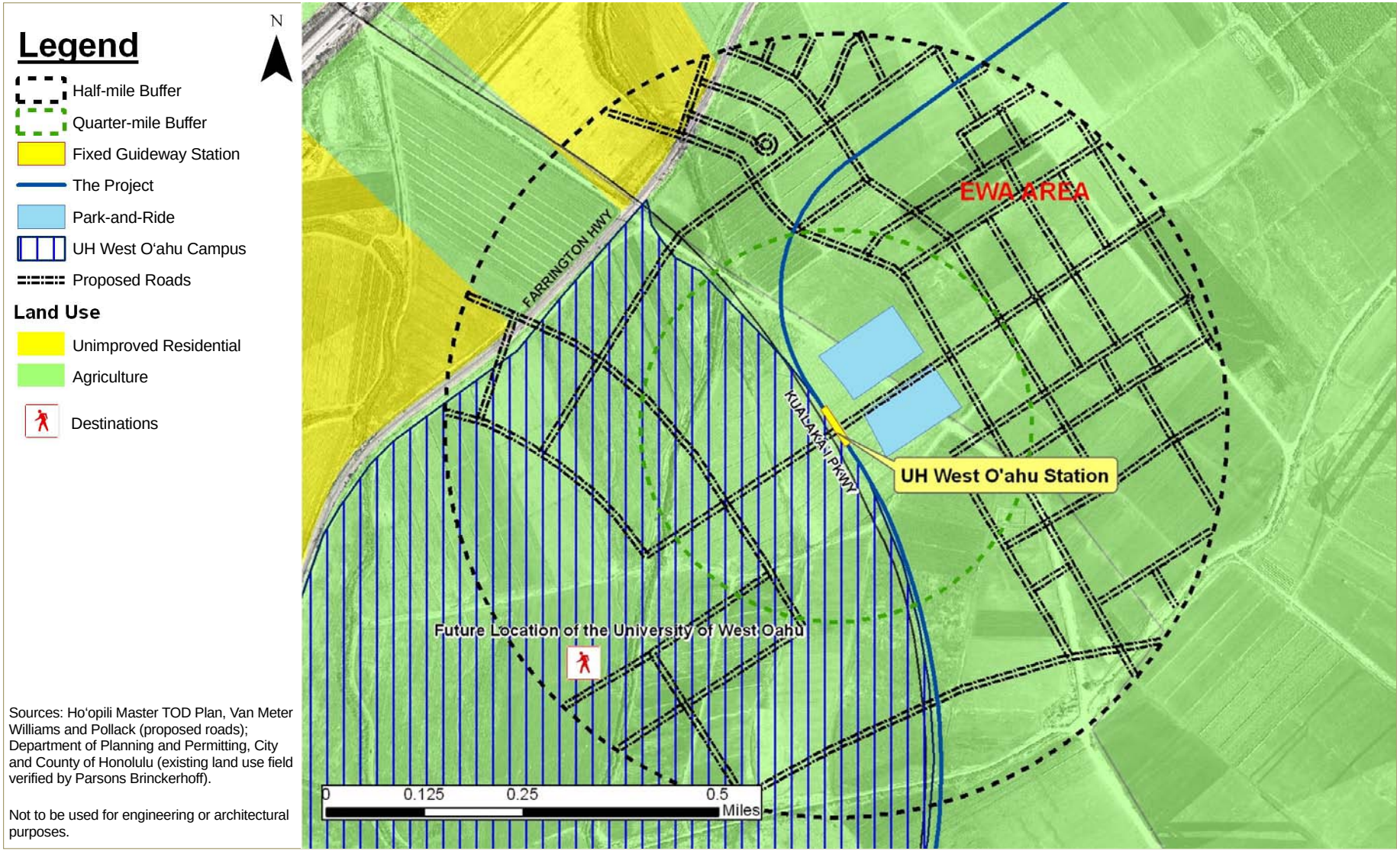
Much of the activity at this station will involve transfers between trains and buses. Bus zones will be located at an off-street transit center near the makai station entrance (six loading bays and four layover positions). It will be important for the station to have large pedestrian plazas that provide a safe and comfortable transition between the transit center and station entrance. Large and inviting pedestrian plazas will be needed to accommodate the potentially large number of students who will arrive to the UH West O‘ahu campus via rail.

Station entrance plazas will be designed to provide active “front doors” for the station. They will provide visible secure spaces for bicycle parking and efficient, easily accessible connections between the station entrances, buses, and nearby developments.

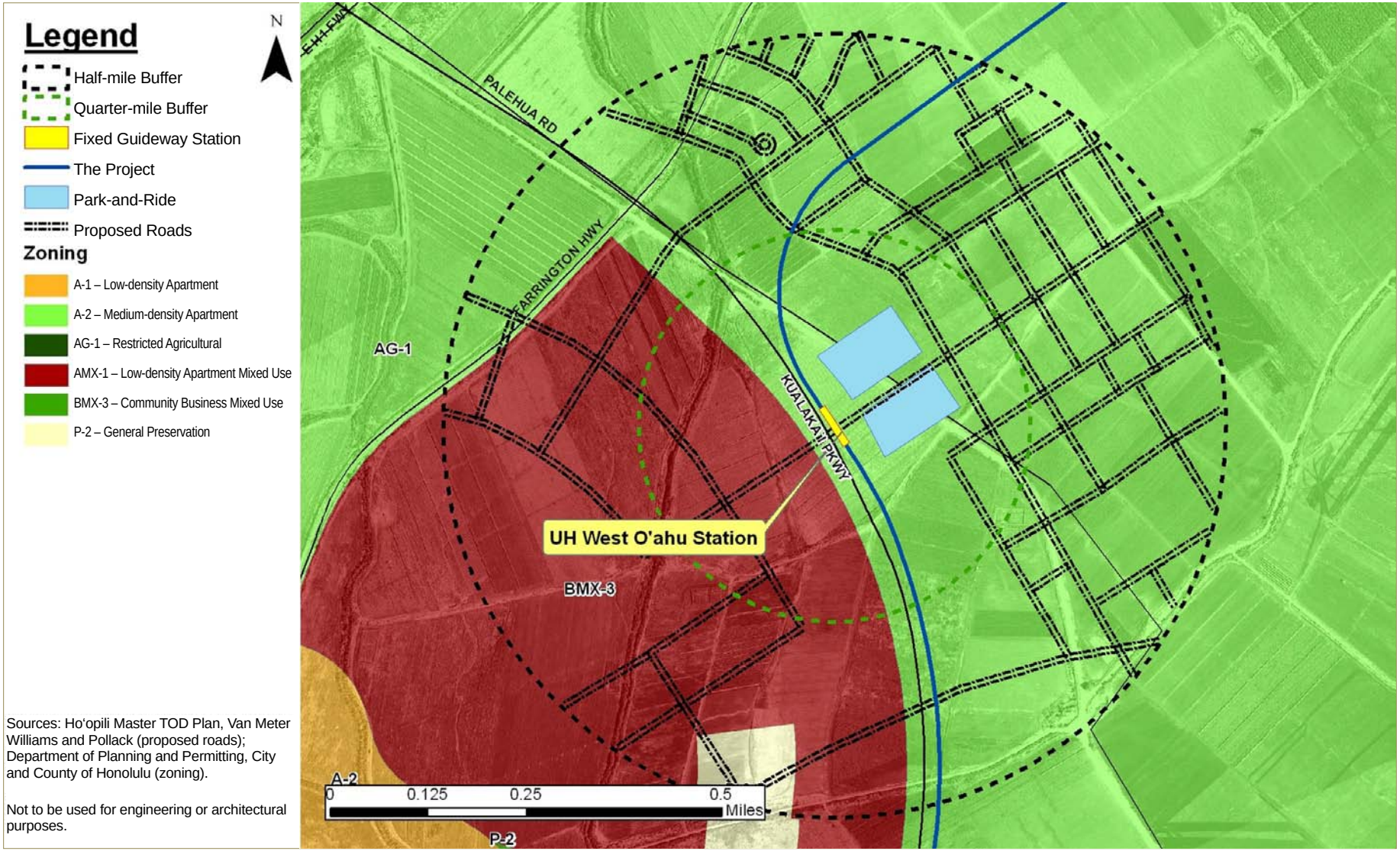
Provide clear connections between station elements

Safe and convenient pedestrian connections between the various station elements will be needed. For riders using the park-and-ride lot on the south side of Campus Access Road, a safe and convenient way to reach the station entrance must be provided. A new crosswalk is proposed to address this issue. As there will be large pedestrian volumes on Campus Access Road near the transit center, the site design should consider potential needs of pedestrians and avoiding conflicts between pedestrians, automobiles, and buses.

UH West O‘ahu Station—Existing Land Use



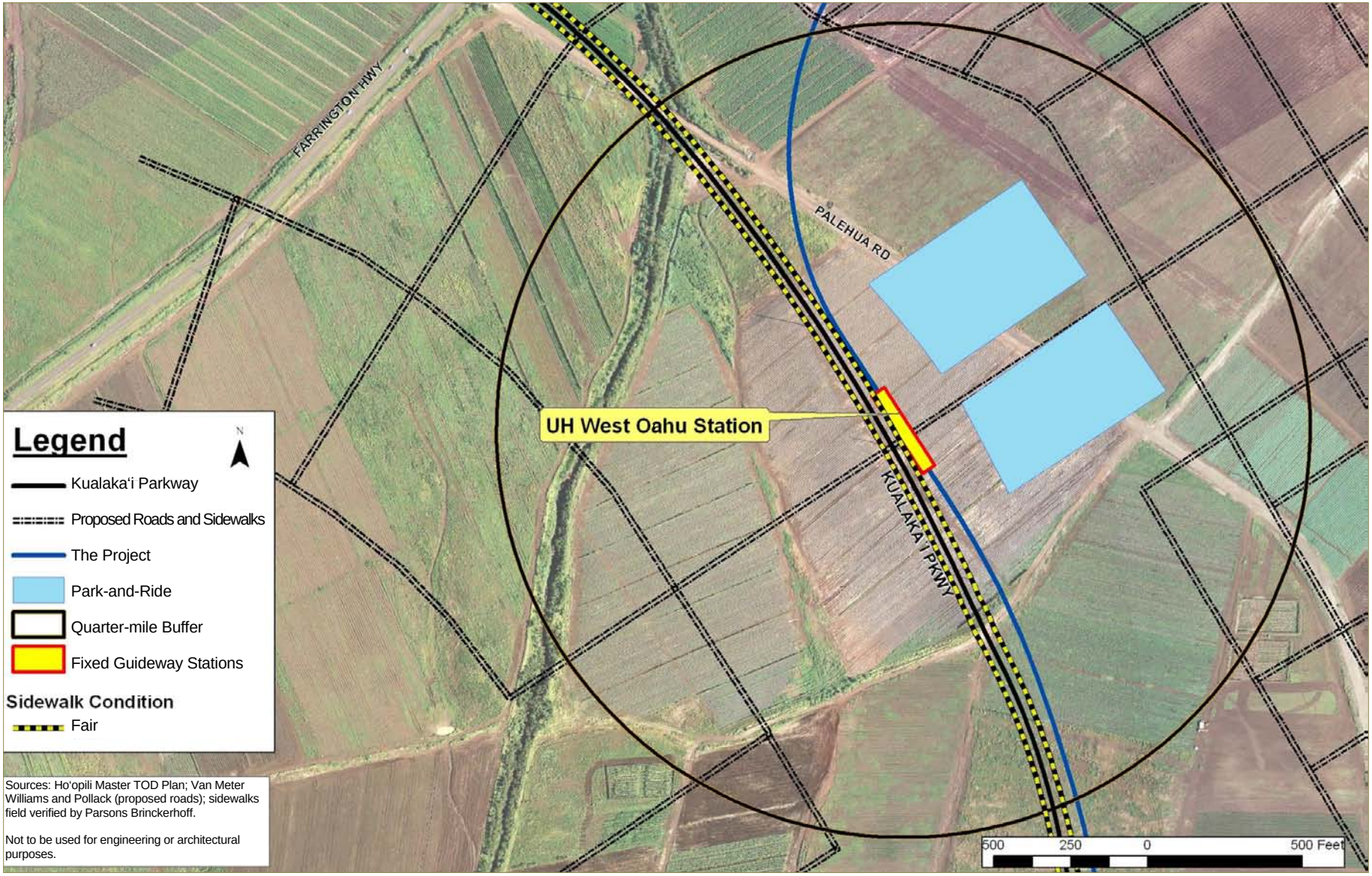
UH West O‘ahu Station—Existing Zoning



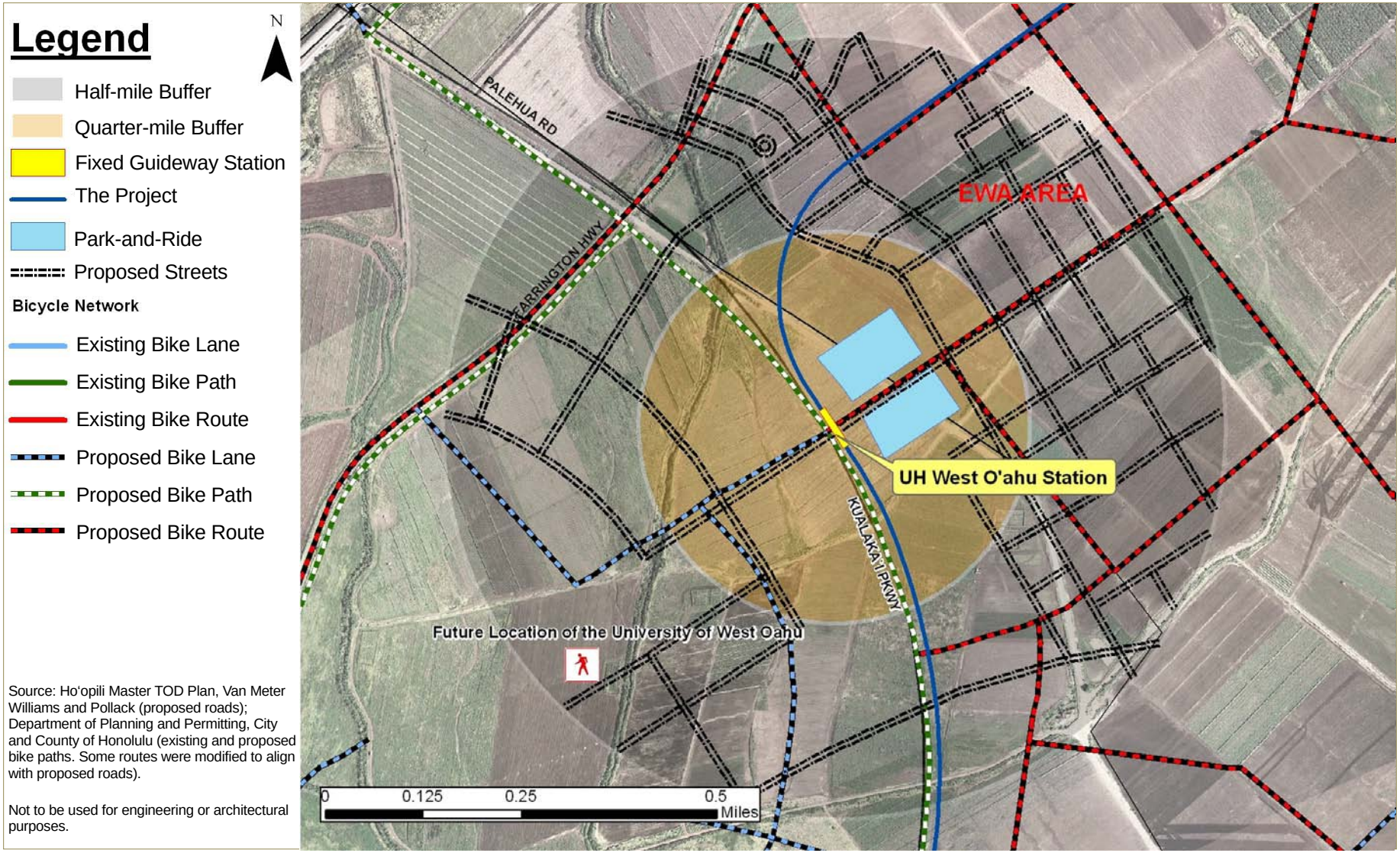
Sources: Ho‘opili Master TOD Plan, Van Meter Williams and Pollack (proposed roads); Department of Planning and Permitting, City and County of Honolulu (zoning).

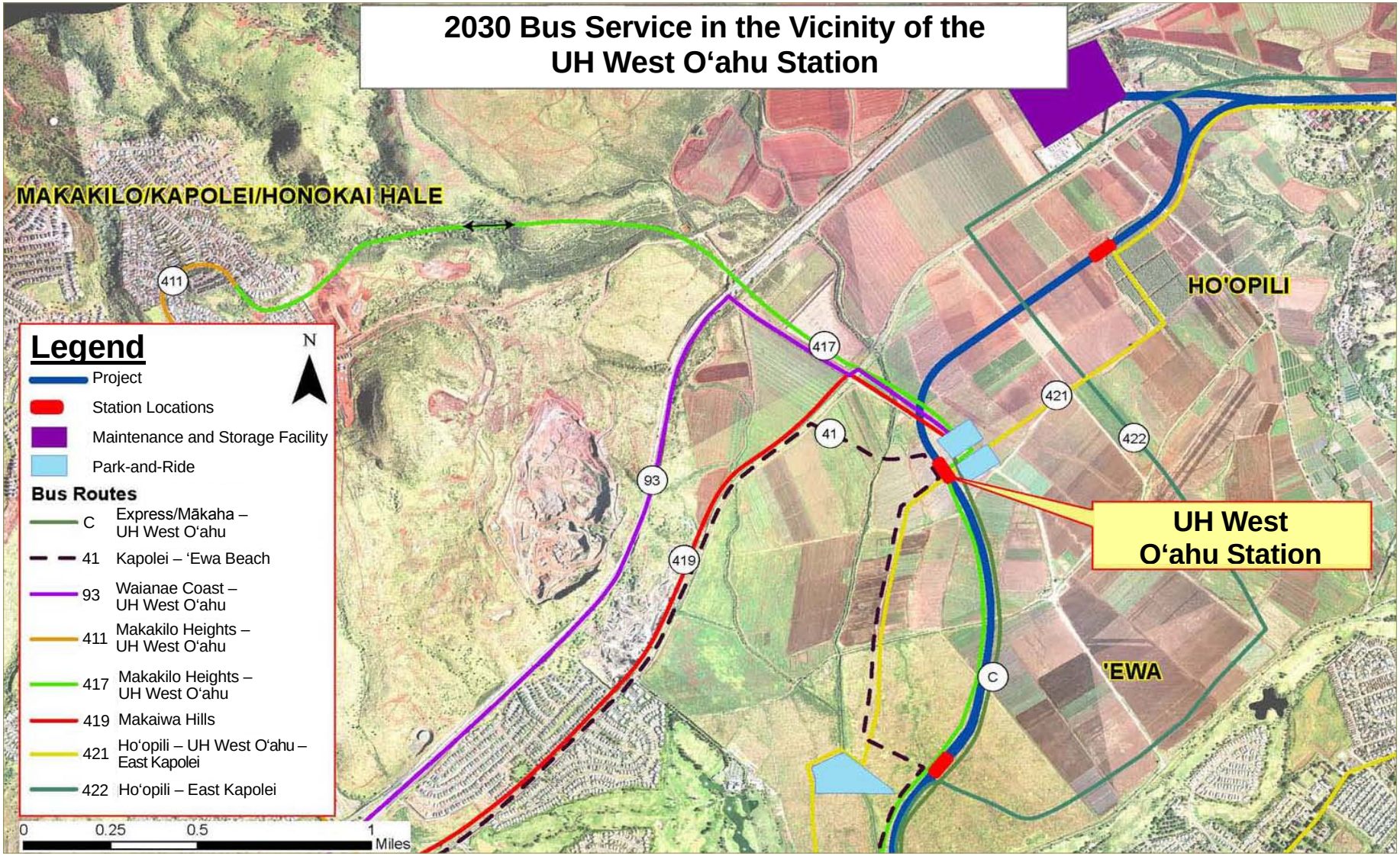
Not to be used for engineering or architectural purposes.

UH West O‘ahu Station—Pedestrian Access

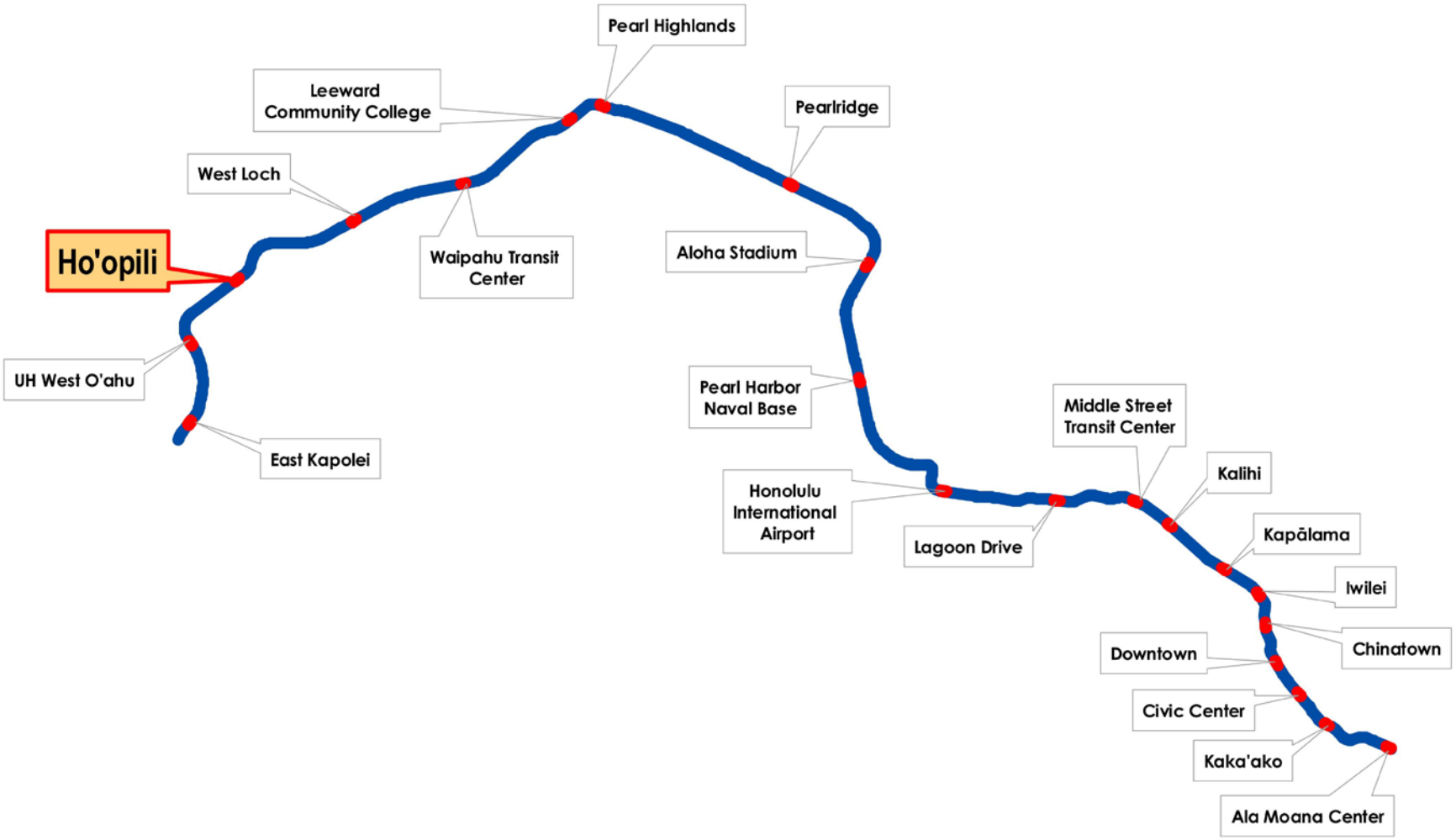


UH West O‘ahu Station—Bicycle Access




2030 Bus Service in the Vicinity of the
UH West O‘ahu Station
MAKAKILO/KAPOLEI/HONOKAI HALE
HO'OPILI
'EWA
UH West
O‘ahu Station
Legend
N
Project
Station Locations
Maintenance and Storage Facility
Park-and-Ride
Bus Routes
C Express/Mākaha – UH West O‘ahu
41 Kapolei – ‘Ewa Beach
93 Waianae Coast – UH West O‘ahu
411 Makakilo Heights – UH West O‘ahu
417 Makakilo Heights – UH West O‘ahu
419 Makaiwa Hills
421 Ho‘opili – UH West O‘ahu – East Kapolei
422 Ho‘opili – East Kapolei
0 0.25 0.5 1 Miles

Ho‘opili Station (HO)



Summary

Ho‘opili Station will be located within a planned mixed-use community makai of Farrington Highway and Koko Head of Kualaka‘i Parkway. Station entrances will likely be located on either side of a future East-West Road. The station will have two entrances and side platforms but no concourse.

Site Considerations and Access

Station location and nearby land use

- Maps showing station area land use and zoning are included in this report.
- Mostly rural/agricultural today, land use is expected to change significantly in the future to include a mix of transit-oriented commercial and residential developments.
- The station will be located in the heart of the future Ho‘opili mixed use community, which is envisioned to follow the principles of neo-traditional neighborhood planning.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown on the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- The street network is planned to be an urban grid pattern with small blocks and narrow streets, making it easy for pedestrians and bicyclists to reach the station.
- Close proximity of mixed-use development near the station will encourage walking and biking.
- Walk and bike access to the station will be supported by station plazas and sidewalks and connections to existing/future bike trails and future sidewalk network in Ho‘opili.
- Bicycle parking will be provided at each station entrance.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report (see Transit Access Map).
- Transfers to/from buses will take place at on-street locations near the station entrances (see Station Area Site Plan).
- TheHandi-Van loading area will be located on-street near one of the station entrances (see Station Area Site Plan).

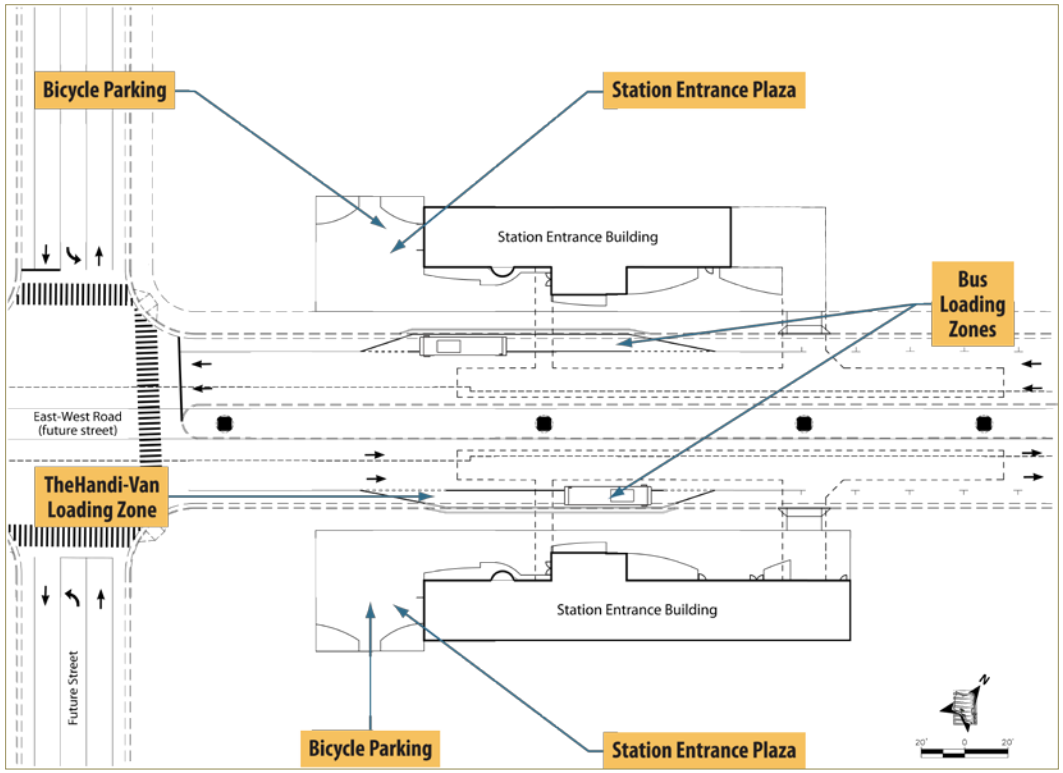
Kiss-and-ride and taxi

- Dedicated space for kiss-and-ride and taxis is not planned at this station.

Park-and-Ride

- A park-and-ride facility will not be provided at this station.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for the various access modes.

Ho‘opili station will have relatively low ridership compared with other stations and will be designed for mostly walk/bike access in anticipation of large scale mixed use development surrounding the station. The station will have **Side Platforms** accessible from two entrances—one on either side of a new street to be built as part of the future Ho‘opili development. The platforms will not be connected by an overhead concourse, which means each entrance will serve only one direction. That will result in more pedestrian traffic crossing the street to make bus connections and other trips, making the design of these street elements more important.

One **Bus** route will serve the station. An on-street bus stop should be provided on either side of the future street in front of the station. A plaza will connect the station to the bus stop.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions		**Other Vehicle Parking**	
45’ Bus Loading Zone	0	Park-and-ride	0
60’ Bus Loading Zone	0	Kiss-and-ride	0
Layover	0	Kiss-and-ride loading/unloading	0
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	0
Eastbound	1	Tour bus/private shuttle	0
Westbound	1	Supervisor	0
Northbound	0	Bicycle parking (opening/2030)	20/20
Southbound	0		

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	500
Alightings	60

Access Mode Daily Trips	
Walk/bike	1,390
Bus	130
Park-and-ride	0
Kiss-and-ride	230
Other	50
Total	1,800

Pedestrian/Bicycle access will be the dominant access mode, serving about three-quarters of the passengers at the station. Patrons will be coming from surrounding residential and commercial locations and will include people from UH West O‘ahu. The station will be designed to accommodate walk/bike access as the primary access mode. Bike racks will be provided at each station entrance, and space will be preserved for future demand. More racks or lockers will be added as needed.

Station Site Design Issues and Challenges

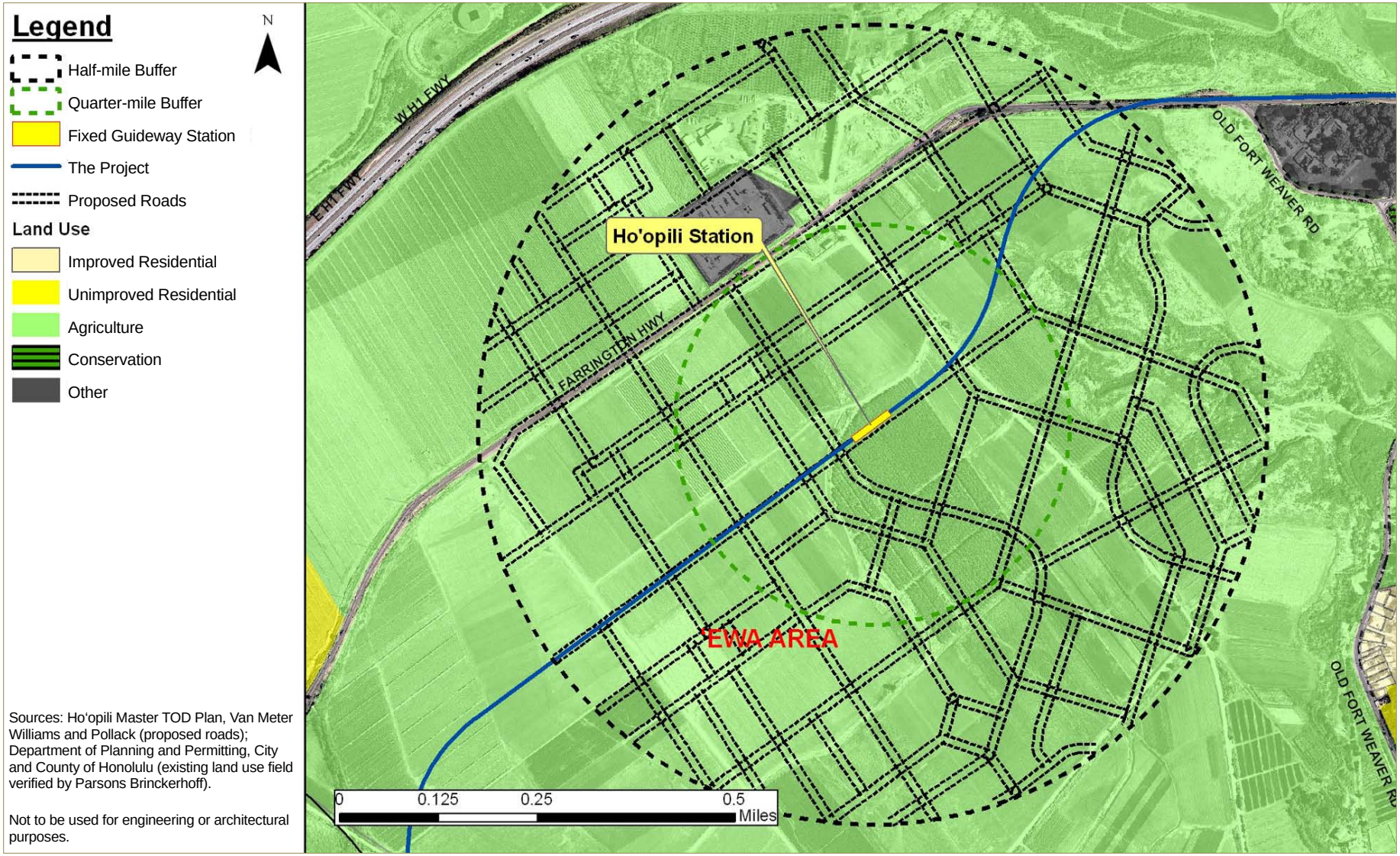
Create comfortable station entrance plazas

It will be important for the station to have large pedestrian plazas that provide a safe and comfortable transition between the street and the station entrance. The pedestrian plazas will be needed to serve pedestrians and bicyclists accessing the station from the future transit-oriented development. Station entrance plazas will be designed to provide highly visible “front doors” for the station. They will be comfortable pedestrian environments and will provide visible secure spaces for bicycle parking and efficient, ADA-accessible connections between the station entrances, buses, and nearby developments. The station will be an important node of activity in the new Ho‘opili community planned for this area. The station design should emphasize and support the importance of the location.

Provide clear connections between station elements

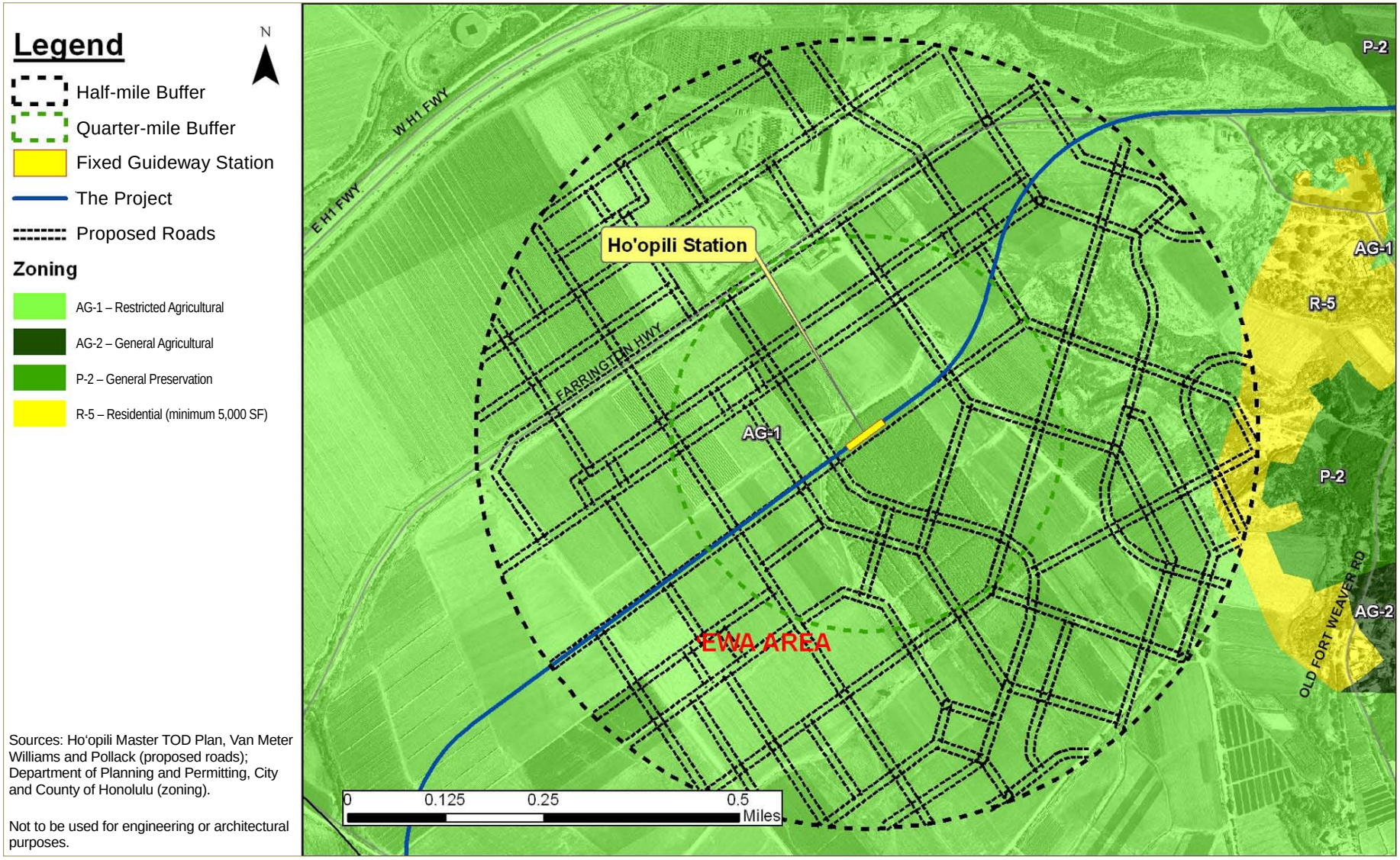
As much as possible, there should be a clear line of sight between the station entrances, sidewalks, bus stops, and TheHandi-Van loading zone. At times, there could be large pedestrian volumes in front of the station entrances and near the on-street bus zones.

Ho‘opili Station—Existing Land Use

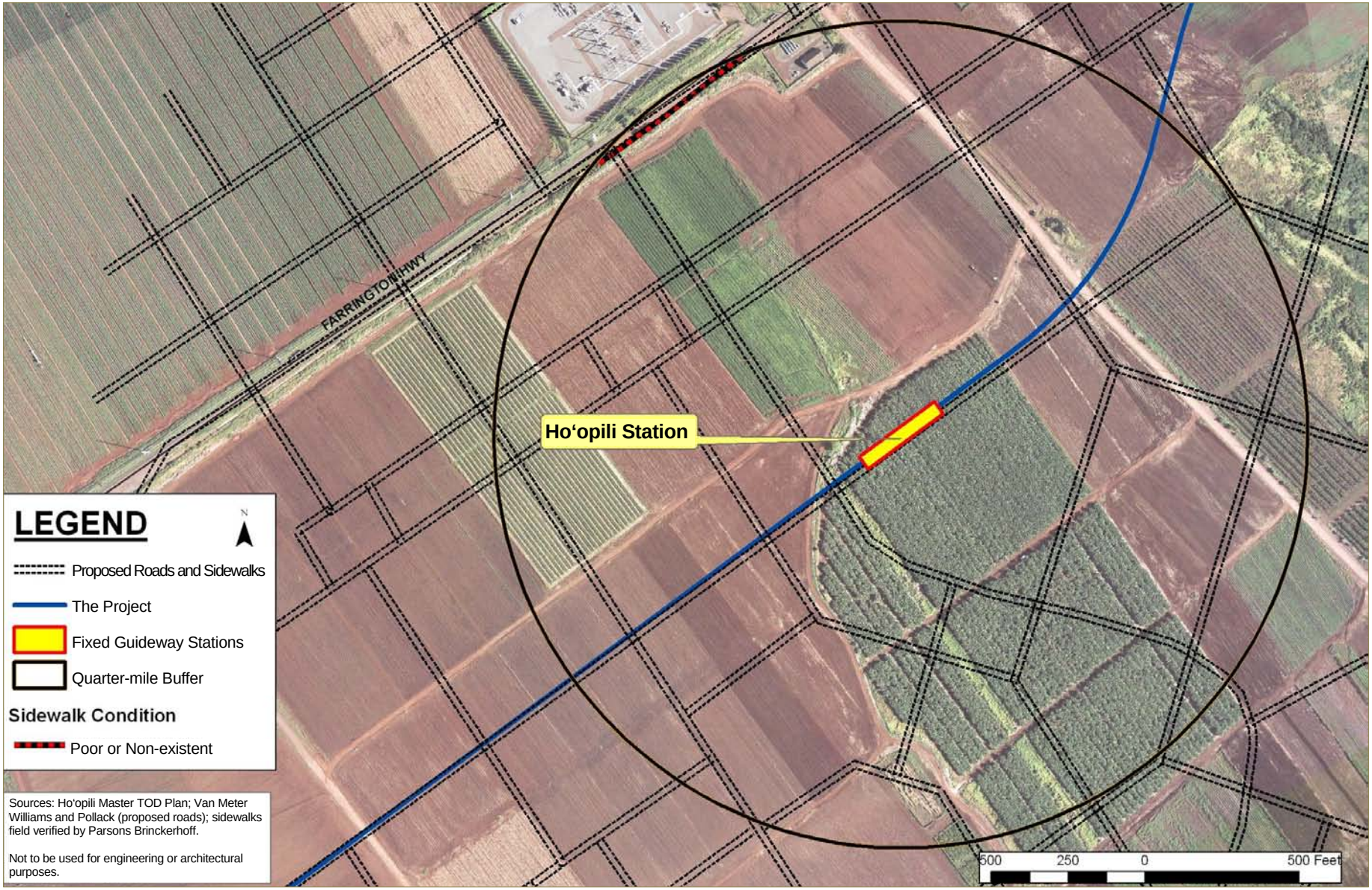


Sources: Ho‘opili Master TOD Plan, Van Meter Williams and Pollack (proposed roads); Department of Planning and Permitting, City and County of Honolulu (existing land use field verified by Parsons Brinckerhoff).

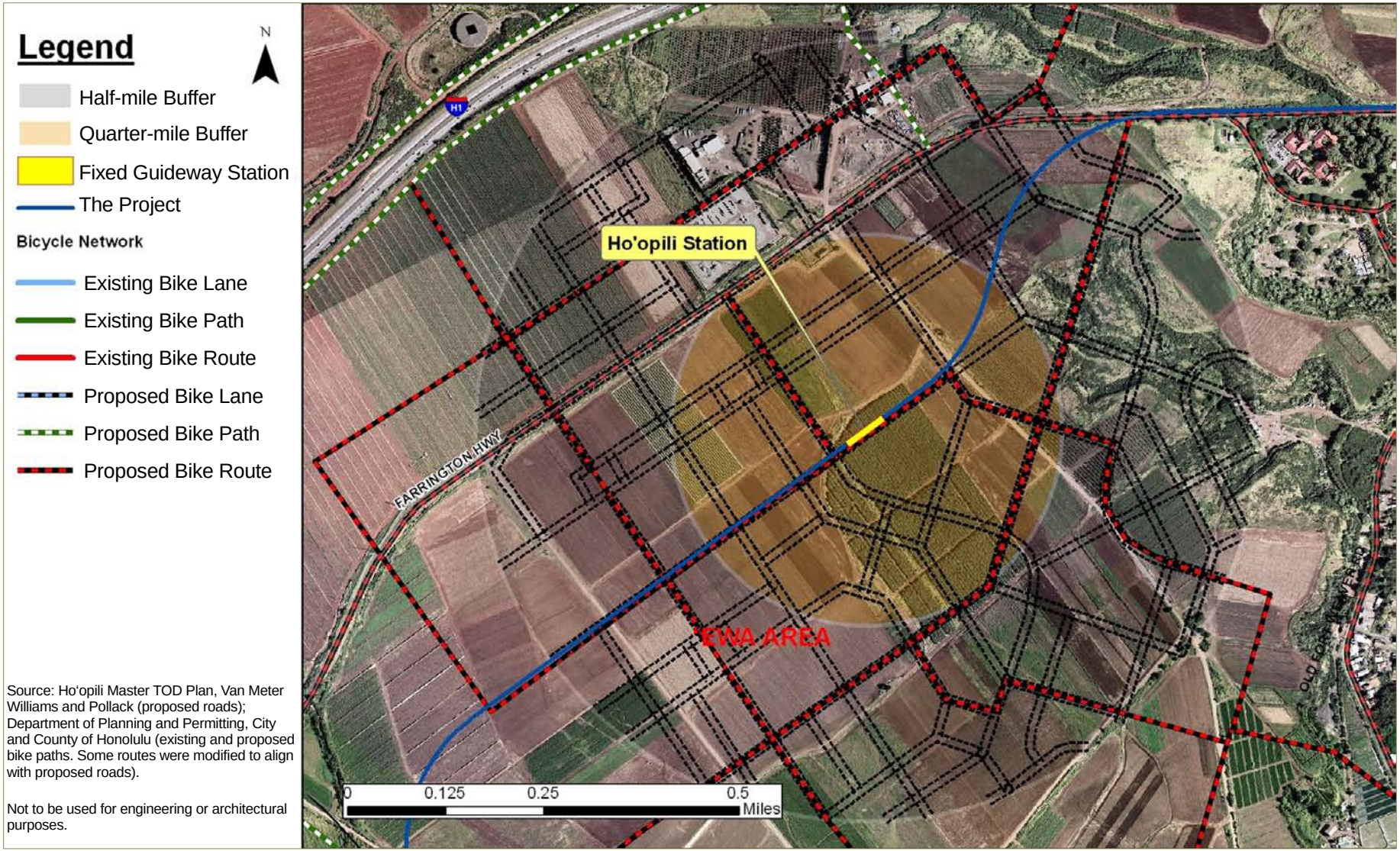
Not to be used for engineering or architectural purposes.


Legend
N
Half-mile Buffer
Quarter-mile Buffer
Fixed Guideway Station
The Project
Proposed Roads
Zoning
AG-1 – Restricted Agricultural
AG-2 – General Agricultural
P-2 – General Preservation
R-5 – Residential (minimum 5,000 SF)
Sources: Ho‘opili Master TOD Plan, Van Meter Williams and Pollack (proposed roads); Department of Planning and Permitting, City and County of Honolulu (zoning).
Not to be used for engineering or architectural purposes.
W H1 FWY
E H1 FWY
Ho'opili Station
FARRINGTON HWY
AG-1
EWA AREA
P-2
AG-1
R-5
P-2
AG-2
OLD FORT WEAVER RD
0
0.125
0.25
0.5
Miles

Ho‘opili Station—Pedestrian Access

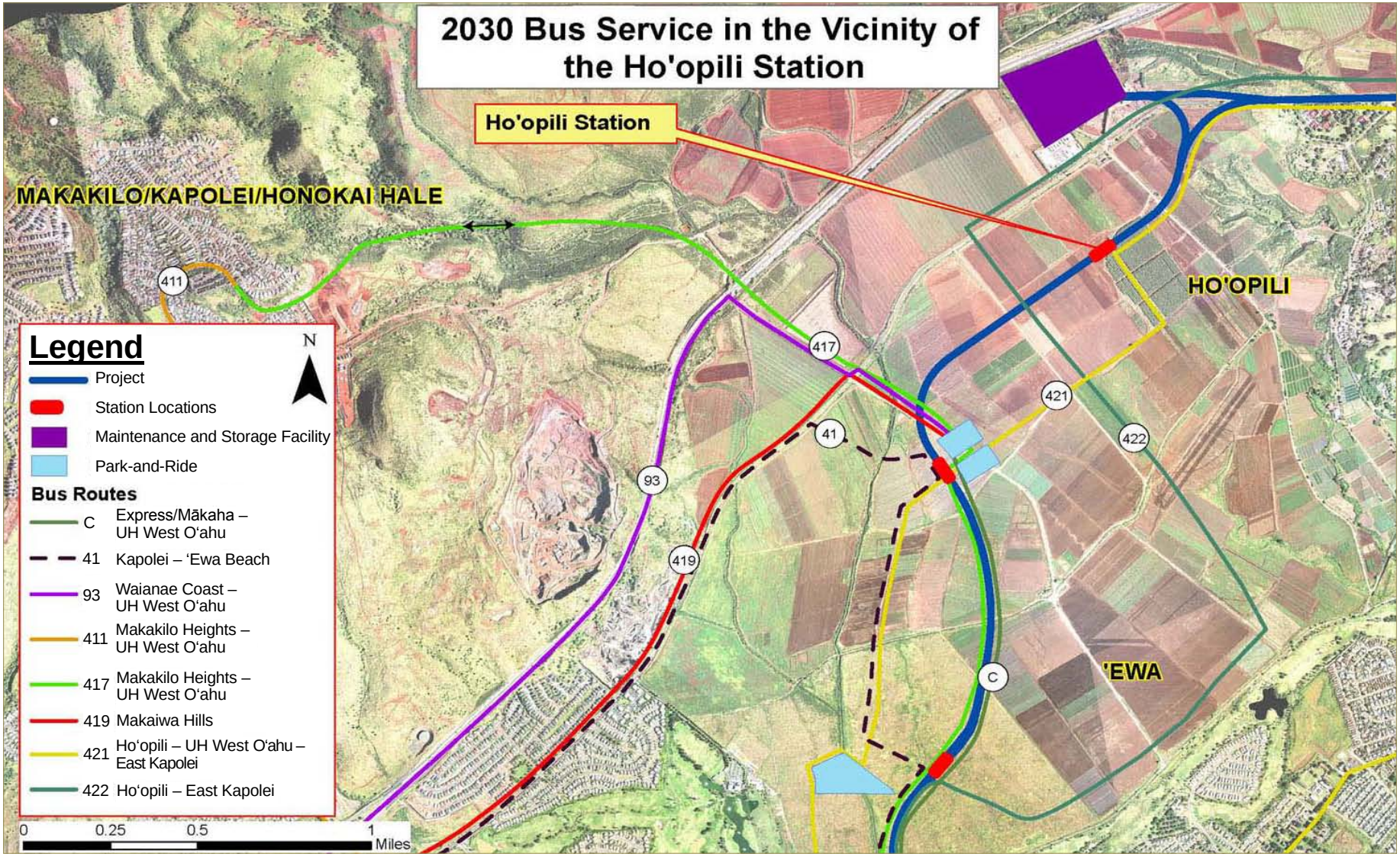


Ho‘opili Station—Bicycle Access

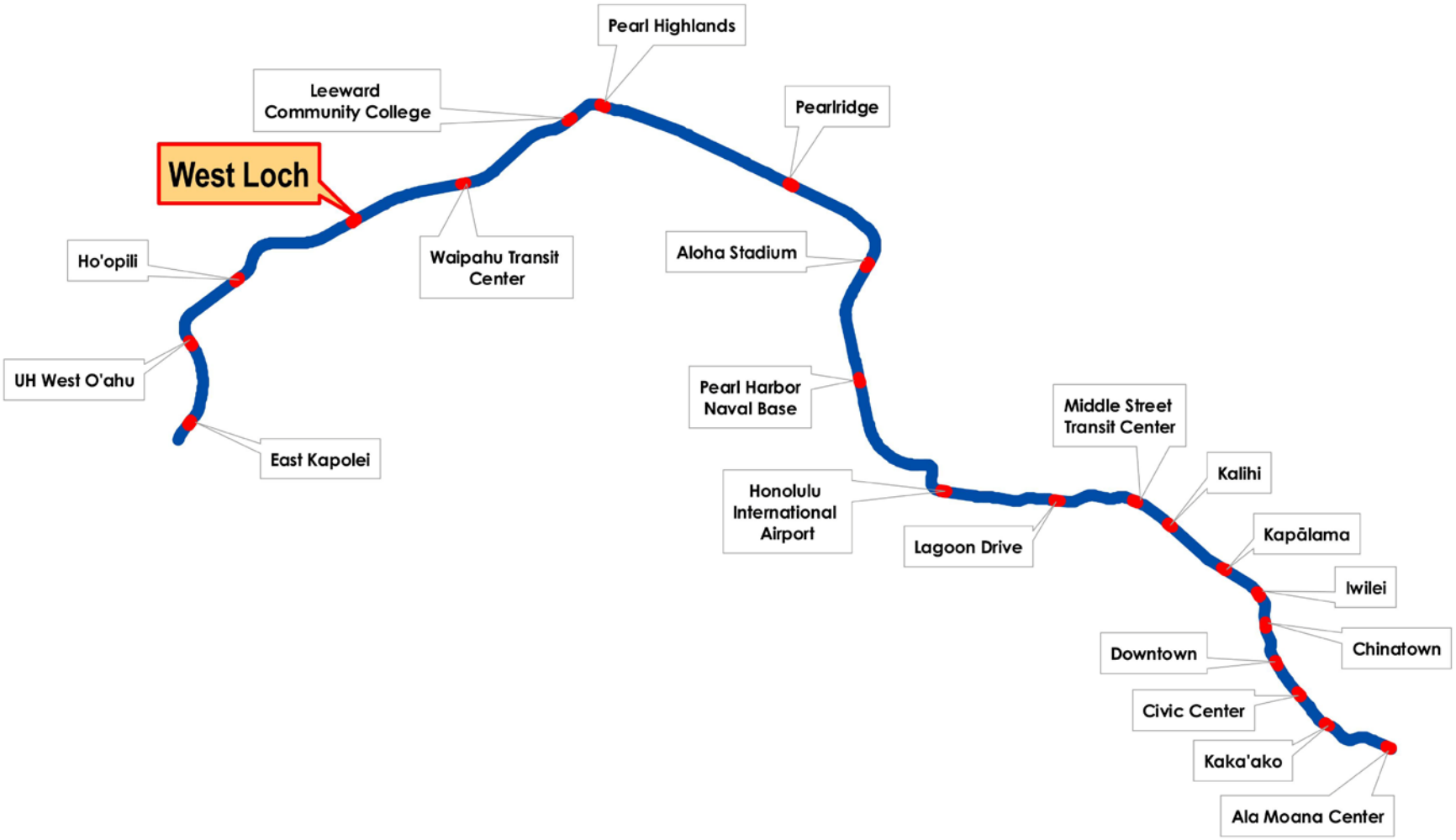


Source: Ho‘opili Master TOD Plan, Van Meter Williams and Pollack (proposed roads); Department of Planning and Permitting, City and County of Honolulu (existing and proposed bike paths. Some routes were modified to align with proposed roads).

Not to be used for engineering or architectural purposes.


2030 Bus Service in the Vicinity of the Ho'opili Station
Ho'opili Station
MAKAKILO/KAPOLEI/HONOKAI HALE
HO'OPILI
'EWA
411
417
421
422
41
93
419
C
Legend
N
Project
Station Locations
Maintenance and Storage Facility
Park-and-Ride
Bus Routes
C Express/Mākaha – UH West O‘ahu
41 Kapolei – ‘Ewa Beach
93 Waianae Coast – UH West O‘ahu
411 Makakilo Heights – UH West O‘ahu
417 Makakilo Heights – UH West O‘ahu
419 Makaiwa Hills
421 Ho‘opili – UH West O‘ahu – East Kapolei
422 Ho‘opili – East Kapolei
0 0.25 0.5 1 Miles

West Loch Station (WL)



Summary

West Loch Station will be located on Farrington Highway at Leoʻole/Leokū Streets. Station entrances on either side of Farrington Highway will be connected by a pedestrian bridge at the concourse level.

Site Considerations and Access

Station location and nearby land use

- Maps showing station area land use and zoning are included in this report. The station area contains a mix of commercial development and low-density housing.
- Residential areas tend to be mauka of the station while the makai side is mostly industrial.
- Farrington Highway, a busy roadway, is characterized by strip commercial development and large commercial parking lots fronting the street.
- Land uses are expected to change to more dense and transit-supportive activities with implementation of the Waipahu Neighborhood TOD Plan
- The neighborhood TOD plan calls for more mixed-use development, housing, employment, and commercial uses.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown on the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- Currently, sidewalks tend to be incomplete, narrow, or in poor condition.
- Pedestrians will approach the station from all directions, including from Leoʻole and Leokū Streets as well as Farrington Highway.
- The Pearl Harbor Bike Trail is nearby and could bring bicycle traffic to the station.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report (see Transit Access Map).
- Most transfers will take place at an off-street transit center located on the makai side of Farrington Highway, while some transfers will take place on Farrington Highway (see Station Area Site Plan).
- A loading zone for TheHandi-Van will be located within the kiss-and-ride lot (see Station Area Site Plan).

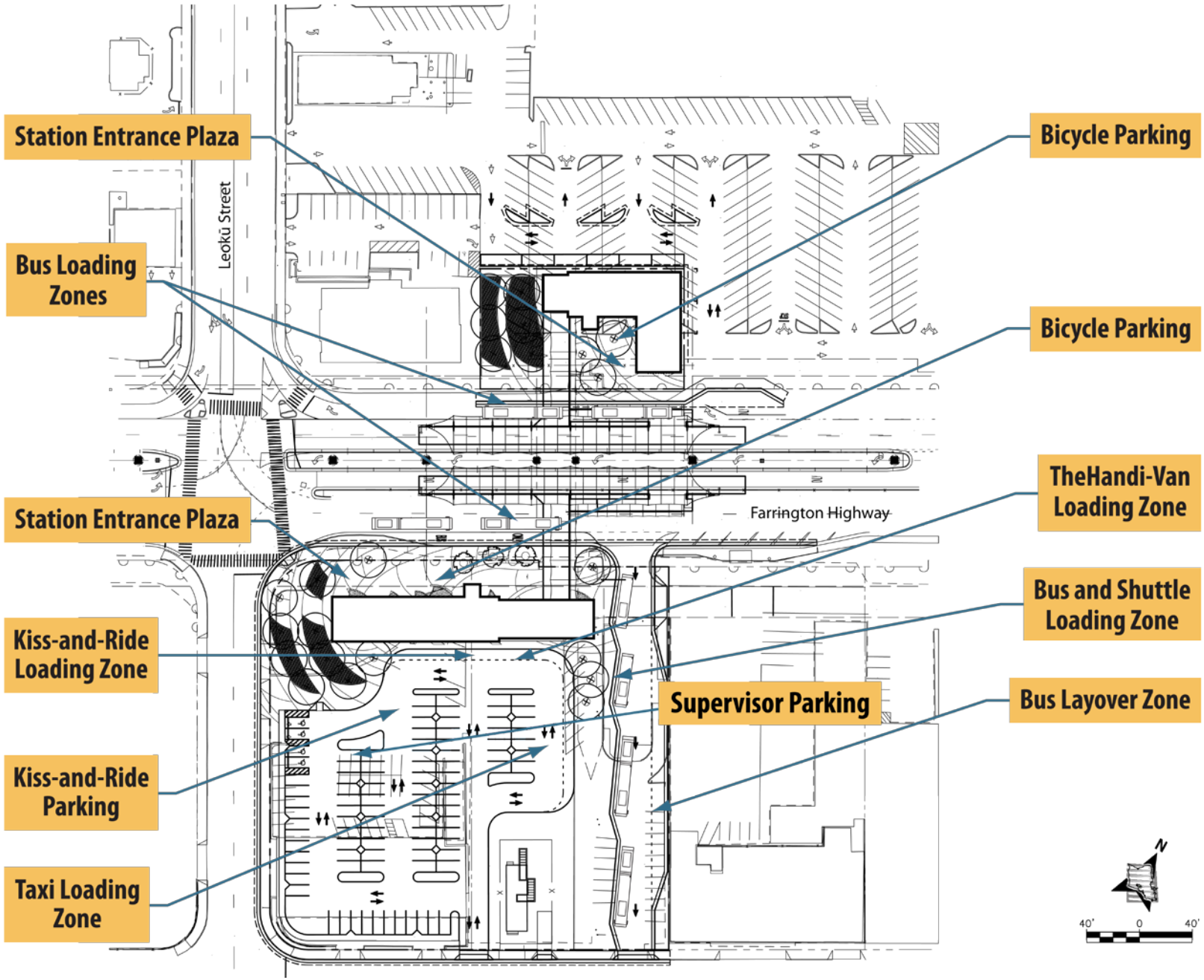
Kiss-and-ride and taxi

- Parking spaces for kiss-and-ride patrons will be provided at an off-street facility near the makai entrance.
- A taxi loading zone will be incorporated into the off-street kiss-and-ride lot near the makai entrance.

Park-and-ride

- There is no plan for a formal park-and-ride at this station, although parking will be included in the off-street facility near the makai entrance.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

West Loch will be a medium-use station that caters to a high projected share and volume of bus transfers. The station will have **Side Platforms** accessible from two entrances—one on either side of Farrington Highway and connected by a concourse.

TheBus will be the dominant access mode, serving about three-quarters of daily riders. To accommodate this demand, an off-street transit center with dedicated bus and shuttle loading zones will be located adjacent to the makai station entrance. The transit center will contain four bus bays (loading zones) for local bus service and two spaces for layover buses.

To accommodate **Pedestrian/Bicycle** access, some improvements to existing sidewalks may be necessary as well as calming of traffic, particularly along Farrington Highway. Parking for a minimum of ten bicycles (using racks) should be provided at each station entrance. Space should be preserved for future bicycle parking demand and more racks or lockers should be added as needed. Walk and bike access to the station will need to be supported by appropriately sized station plazas and improvements to nearby sidewalks.

Kiss-and-Ride, **Taxi**, and **TheHandi-Van** will all be accommodated in the off-street kiss-and-ride lot adjacent to the makai station entrance. One loading zone for TheHandi-Van vehicles will be provided. A **Park-and-Ride** facility is not planned, although parking could be available for a limited number of cars.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions [1]		**Other Vehicle Parking**	
45' Bus Loading Zone	3	Park-and-ride	0
60' Bus Loading Zone	1	Kiss-and-ride	20
Layover	2	Kiss-and-ride loading/unloading	2
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	2
Eastbound	2	Tour bus/private shuttle	1
Westbound	2	Supervisor	1
Northbound	0	Bicycle parking (opening/2030)	20/50
Southbound	0		

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

[1] At transit center located near makai station entrance

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	1,050
Alightings	400

Access Mode Daily Trips	
Walk/bike	670
Bus	4,020
Park-and-ride	0
Kiss-and-ride	500
Other	110
Total	5,300

Station Site Design Issues

Create comfortable station entrance plazas

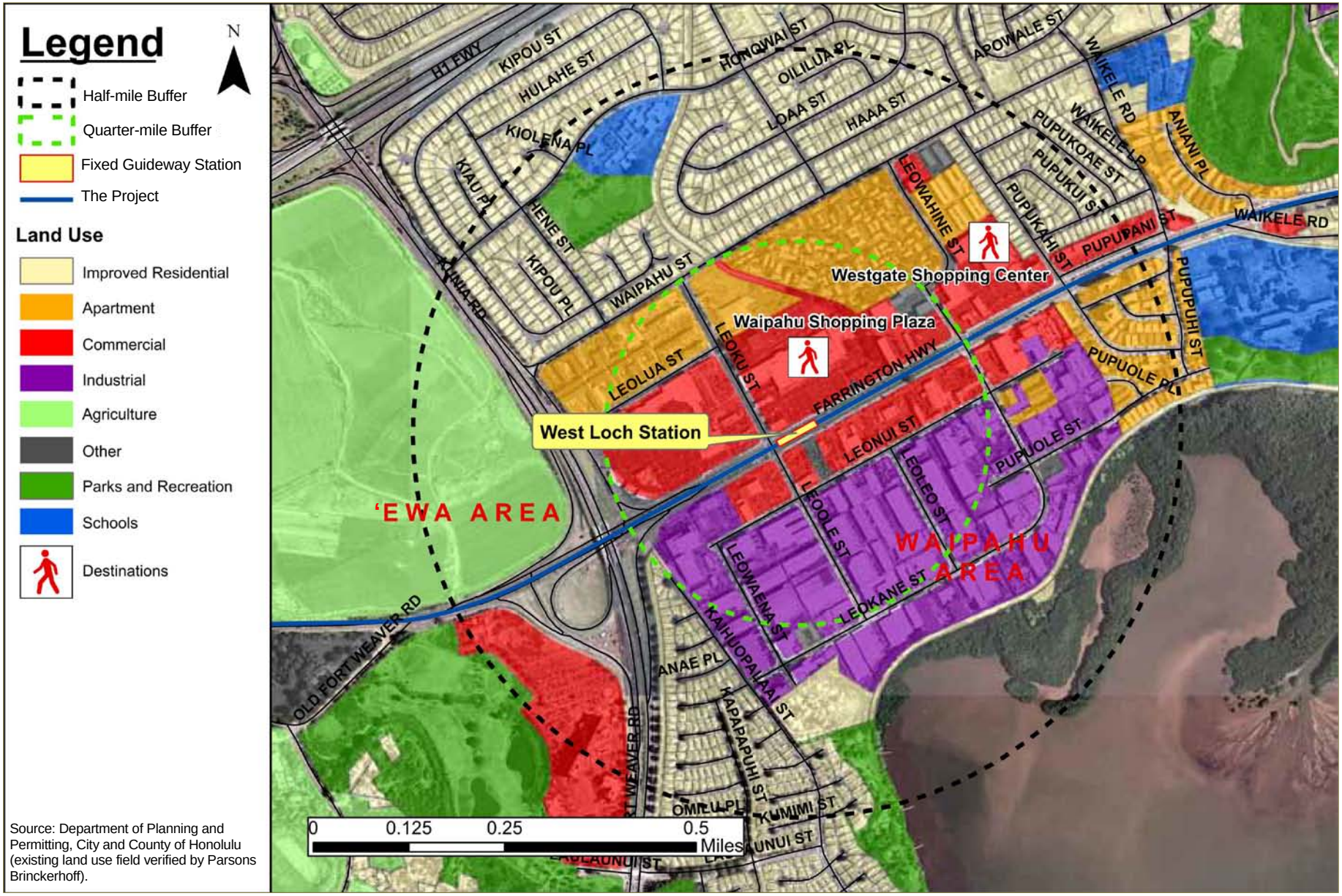
About three-quarters of the demand at this station will be bus transfers. As a heavily used bus transfer location , West Loch will be need to have large pedestrian plazas that provide a safe and comfortable transition between the station entrance, the off-street bus transit center, and other station elements.

A challenge will be to orient the makai station entrance to serve on-street pedestrians and bus passengers on Farrington Highway, while also accommodating transfers occurring at the off-street bus transit center. The design should avoid potential conflicts between vehicles and pedestrians.

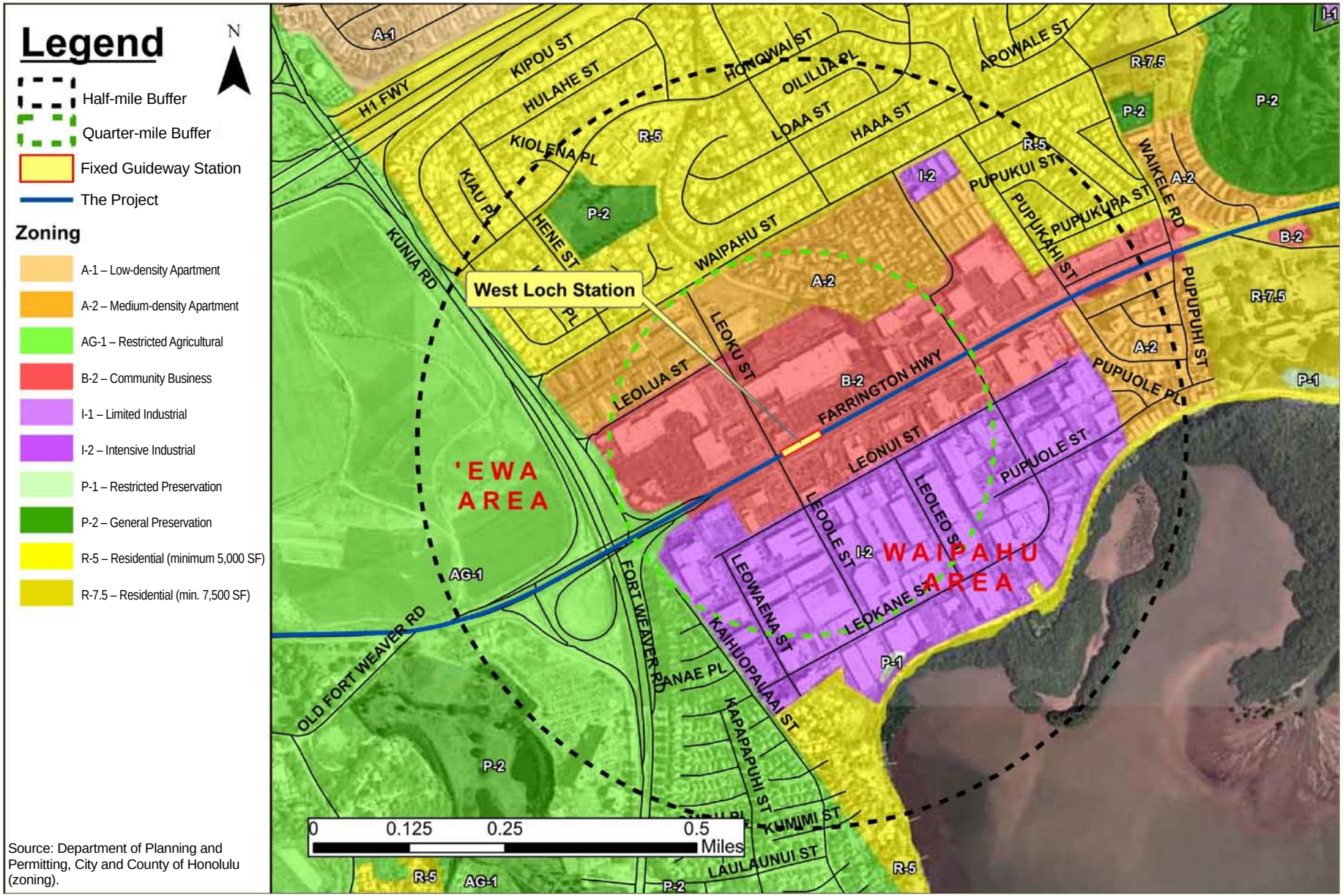
Provide clear connections between station elements

Safe and convenient pedestrian connections between the various station elements will be needed. As much as possible, there should be a clear line of sight between the station entrances, sidewalks, on-street bus stops, and the bus bays located in the off-street bus transit center.

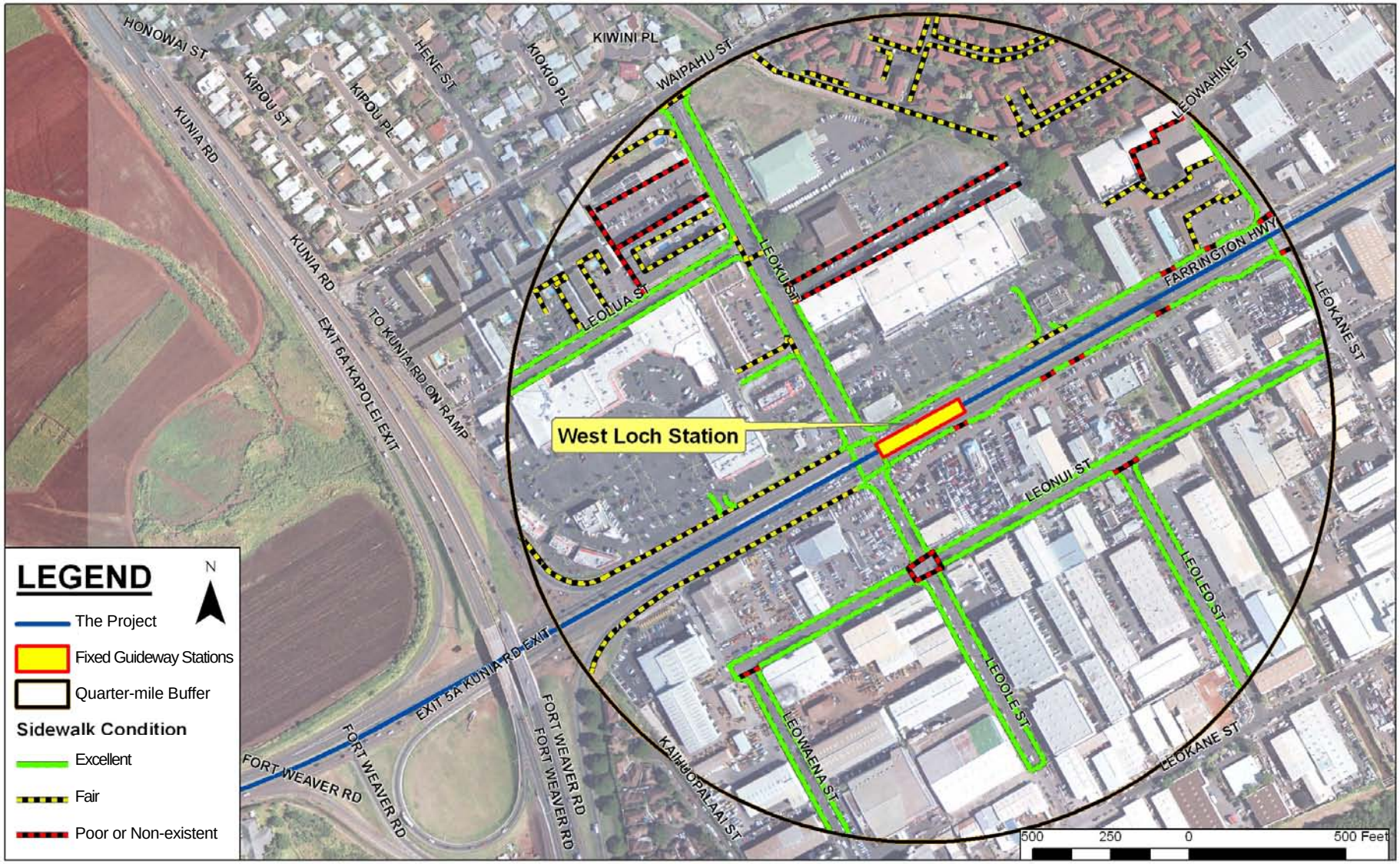
West Loch Station—Existing Land Use



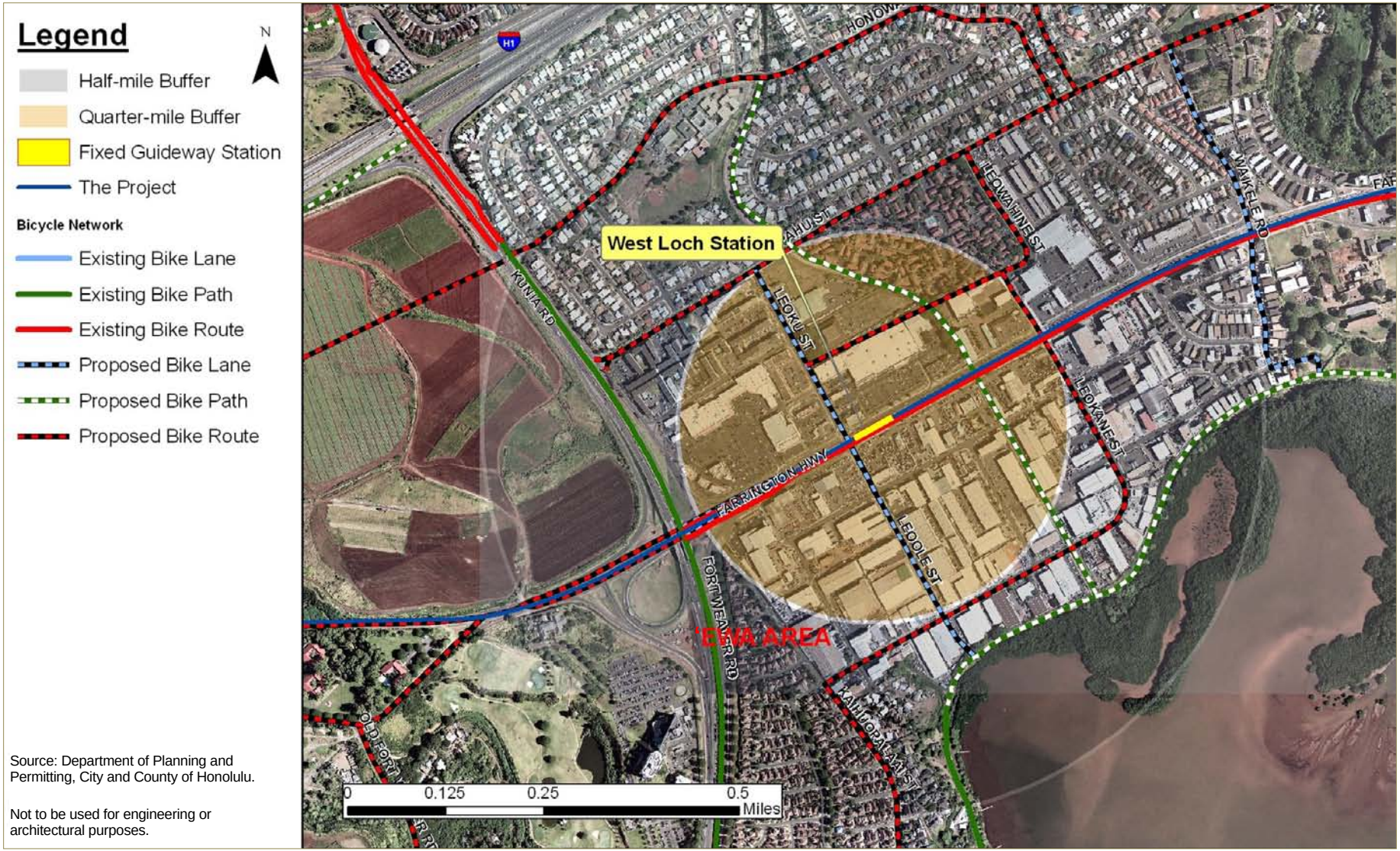
West Loch Station—Existing Zoning



West Loch Station—Pedestrian Access

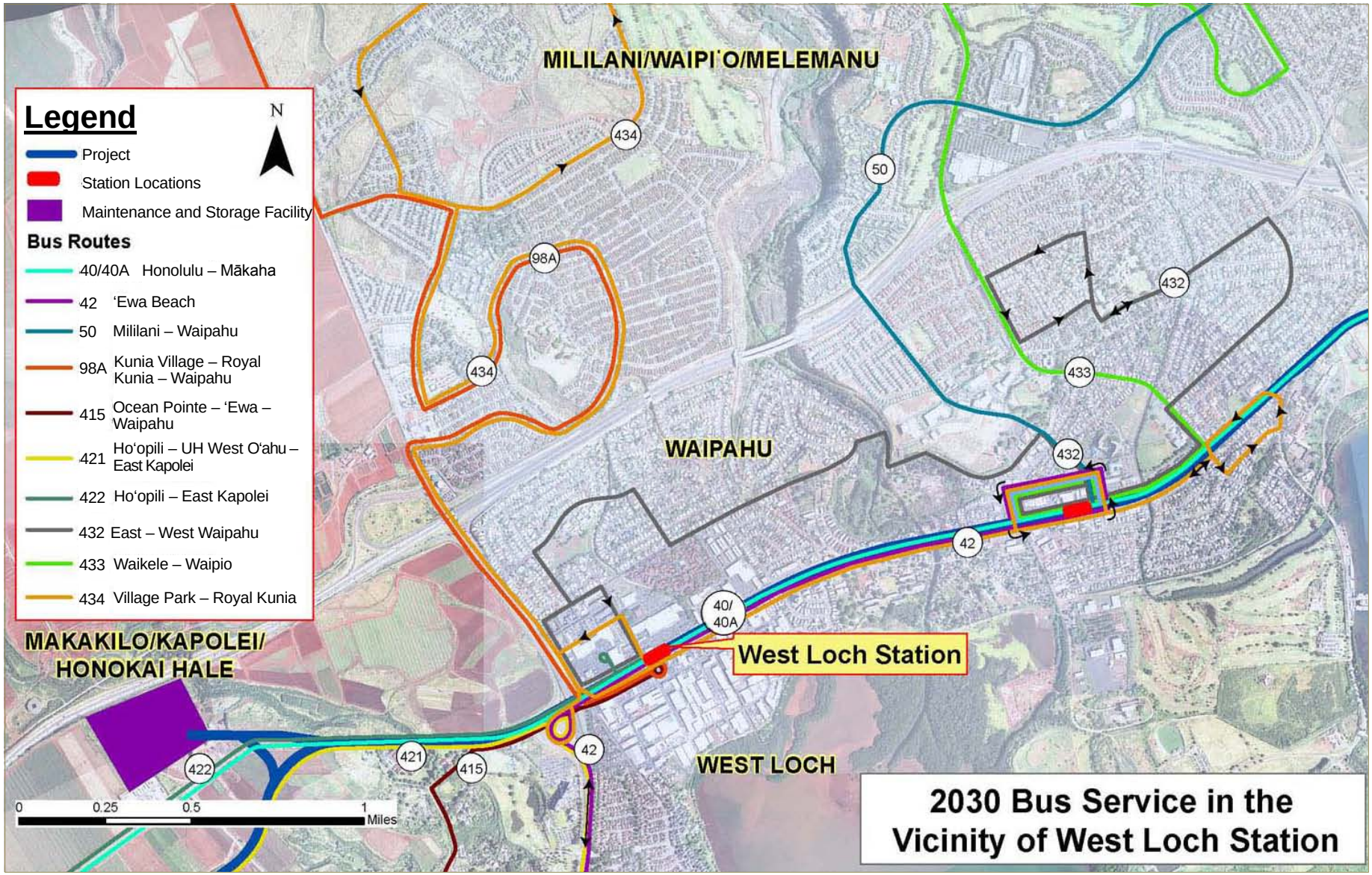


West Loch Station—Bicycle Access

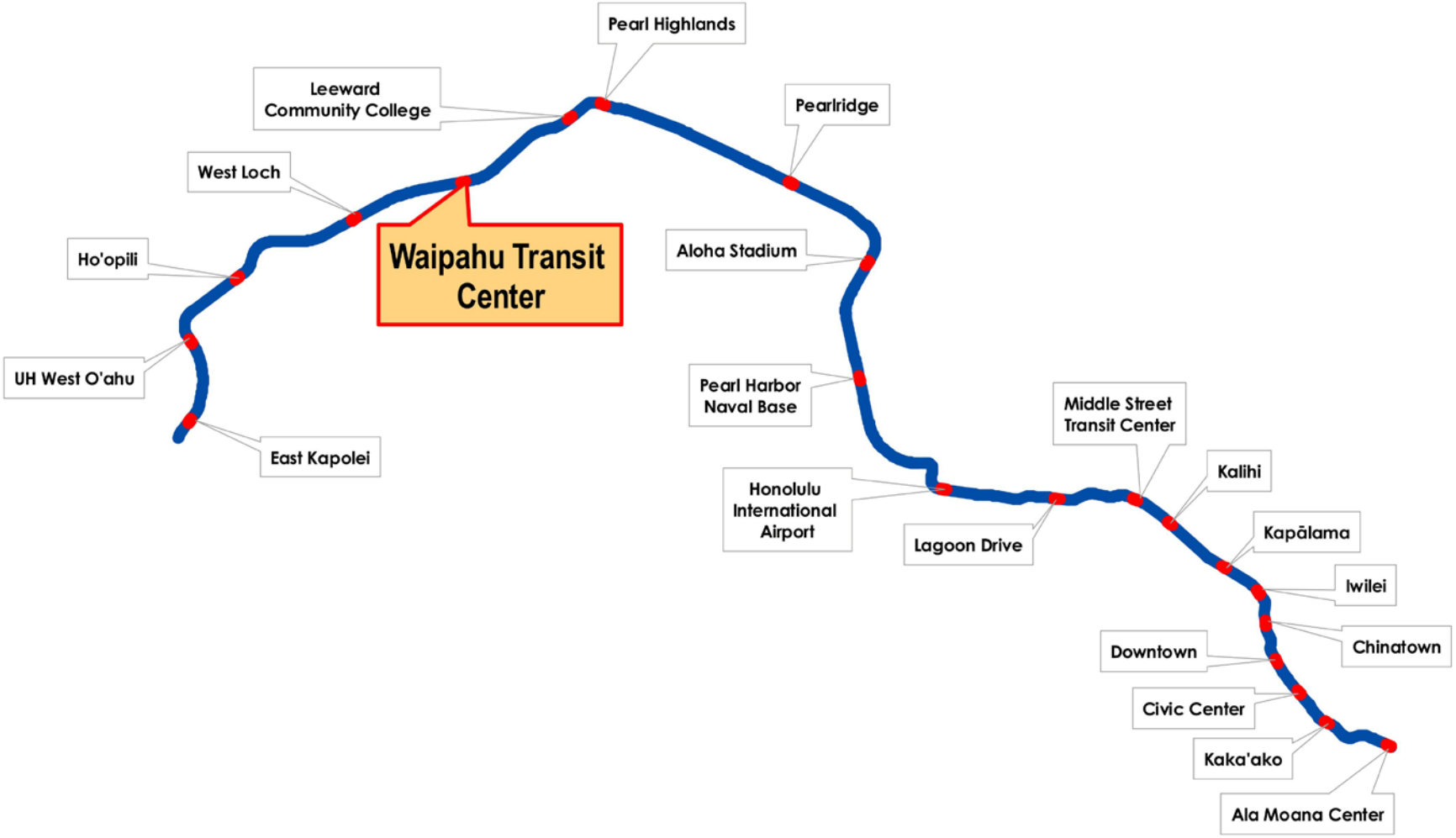


Source: Department of Planning and Permitting, City and County of Honolulu.

Not to be used for engineering or architectural purposes.


Legend
N
Project
Station Locations
Maintenance and Storage Facility
Bus Routes
40/40A Honolulu – Mākaha
42 ʻEwa Beach
50 Mililani – Waipahu
98A Kunia Village – Royal Kunia – Waipahu
415 Ocean Pointe – ʻEwa – Waipahu
421 Hoʻopili – UH West Oʻahu – East Kapolei
422 Hoʻopili – East Kapolei
432 East – West Waipahu
433 Waikele – Waipio
434 Village Park – Royal Kunia
MILILANI/WAIPIʻO/MELEMANU
WAIPAHU
WEST LOCH
MAKAKILO/KAPOLEI/
HONOKAI HALE
West Loch Station
0 0.25 0.5 1 Miles
2030 Bus Service in the Vicinity of West Loch Station

Waipahu Transit Center Station (WC)



Summary

The Waipahu Transit Center Station will be located on Farrington Highway near Mokuola Street. Station entrance buildings will be connected by a pedestrian bridge spanning Farrington Highway at the concourse level.

Site Considerations and Access

Station location and nearby land use

- Maps showing station area land use and zoning are included in this report.
- Land uses are expected to change to more dense and transit-supportive activities with implementation of the Waipahu Neighborhood TOD Plan
- Station area includes commercial, light industrial, and residential land uses.
- The nearby Waipahu Transit Center on Hikimoe Street serves numerous bus transfers.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown in the station area site plan to the right and in the Pedestrian and Bicycle Access Maps on the following pages.
- Current sidewalk and street conditions in the station area are generally not supportive of pedestrians and bicycles.
- New crosswalks will be provided at key crossing locations in the station area.
- With future redevelopment in the station area, the sidewalk and streetscape will improve over current conditions, thereby providing the opportunity for enhanced station access.
- Walk and bike access to the station will need to be supported by station plazas, sidewalks, and associated wayfinding.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report (see Transit Access Map).
- Transfers will take place at the Waipahu Transit Center located on Hikimoe Street (see Station Area Site Plan).
- TheHandi-Van loading area will be located at the Waipahu Transit Center on Hikimoe Street (see Station Area Site Plan).

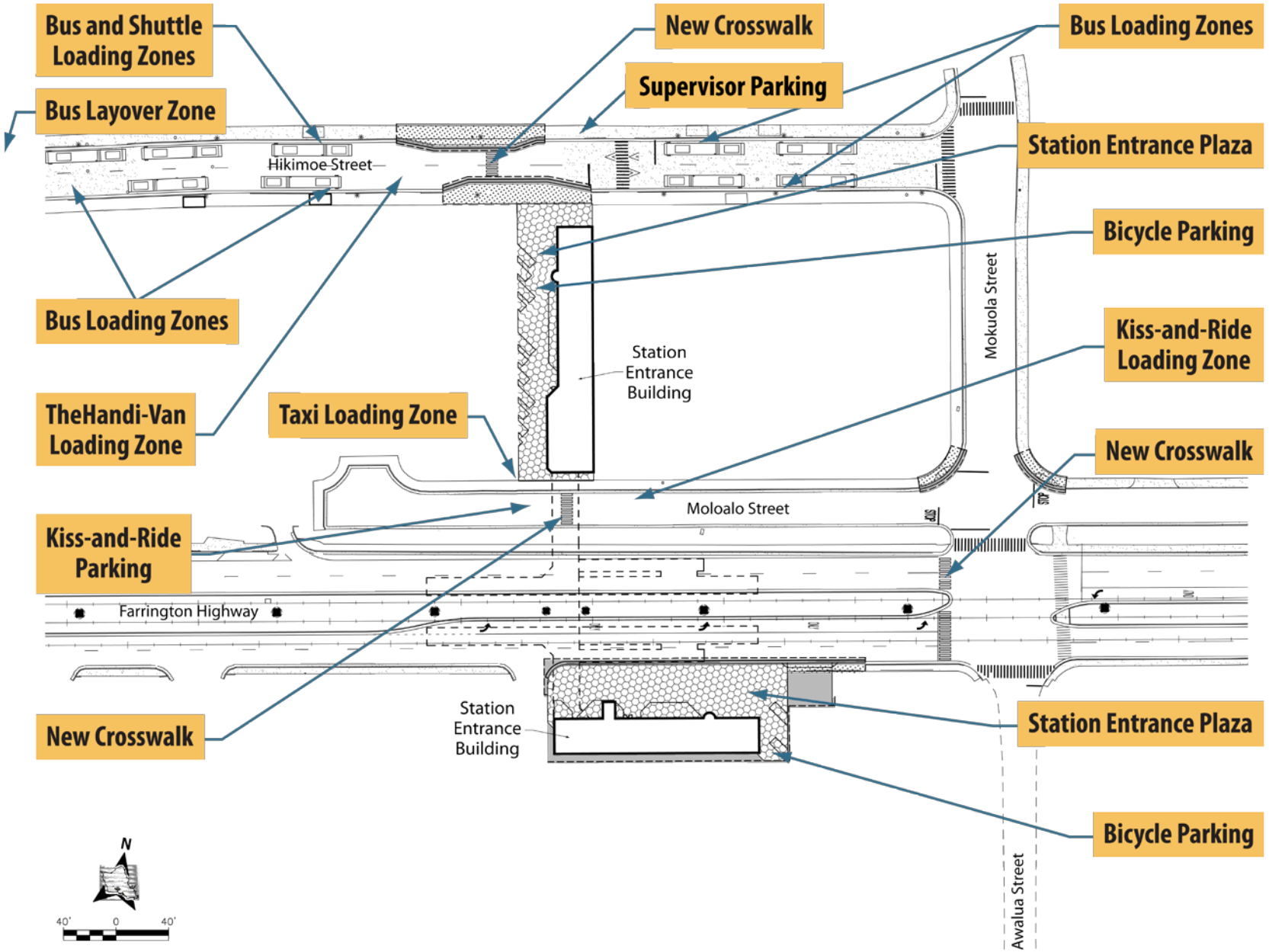
Kiss-and-ride and taxi

- Short-term parking for kiss-and-ride patrons will be provided on Moloalo Street.
- A taxi loading zone will also be provided on Moloalo Street.

Park-and-ride

- A park-and-ride facility will not be provided at this station.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Waipahu Transit Center is a medium-use station with a more compact design that caters to a high projected volume and share of bus transfers from an existing transit center on an adjacent side street (Hikimoe Street). The station will have **Side Platforms** accessible from two entrances—one on either side of Farrington Highway and connected by a concourse.

TheBus will be the dominant access mode, serving about two-thirds of daily passengers. This demand will be accommodated at the existing Waipahu Transit Center located in Hikimoe Street one block mauka of Farrington Highway. The mauka station entrance will lead directly to Hikimoe Street, providing easy access between rail and bus service. The transit center will also be used for **TheHandi-Van** vehicles.

To accommodate **Pedestrian/Bicycle** access, some improvements to existing sidewalks will be important as well as traffic calming measures, particularly along Farrington Highway. New crosswalks are recommended to improve pedestrian access and safety across Farrington Highway and Hikimoe Street. Bike racks should be distributed among station entrances (10 at each entrance). Also, space should be preserved for future demand and more racks or lockers should be added as needed.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions [1]		**Other Vehicle Parking**	
45' Bus Loading Zone	0	Park-and-ride	0
60' Bus Loading Zone	8	Kiss-and-ride	0
Layover	1	Kiss-and-ride loading/unloading	1
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	0
Eastbound	0	Tour bus/private shuttle	2
Westbound	0	Supervisor	1
Northbound	0	Bicycle parking (opening/2030)	20/30
Southbound	0		

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

[1] At existing Waipahu transit center located near mauka station entrance

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	580
Alightings	190

Access Mode Daily Trips	
Walk/bike	550
Bus	2,260
Park-and-ride	0
Kiss-and-ride	230
Other	50
Total	3,090

Station Site Design Issues and Challenges

Create comfortable station entrance plazas

As a possible TOD site and heavily frequented bus transfer facility, the station will need to have large pedestrian plazas that provide a safe and comfortable transition between the Waipahu Transit Center on Hikimoe Street and the mauka station entrance. Station entrance plazas should provide visible secure spaces for bicycle parking and efficient, accessible connections between station entrances, buses, and nearby developments.

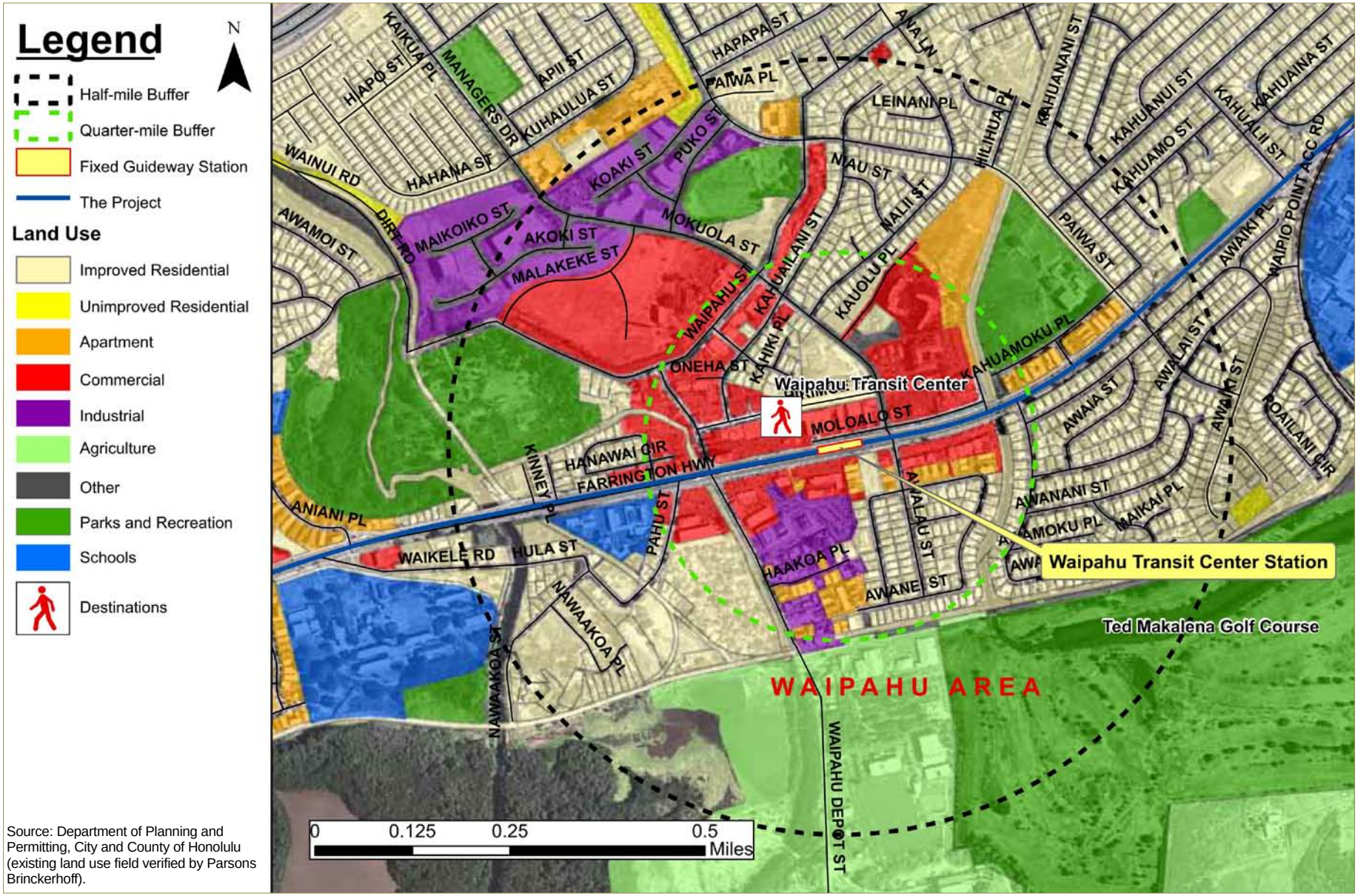
Orient station entrance to serve all users

The mauka entrance will serve bus transit and TheHandi-Van passengers coming from Hikimoe Street. This entrance will also serve kiss-and-ride and taxi patrons on Moloalo Street and pedestrians on the mauka side of Farrington Highway. The station entrance should be designed and oriented to accommodate all users.

Work with other City and State Agencies

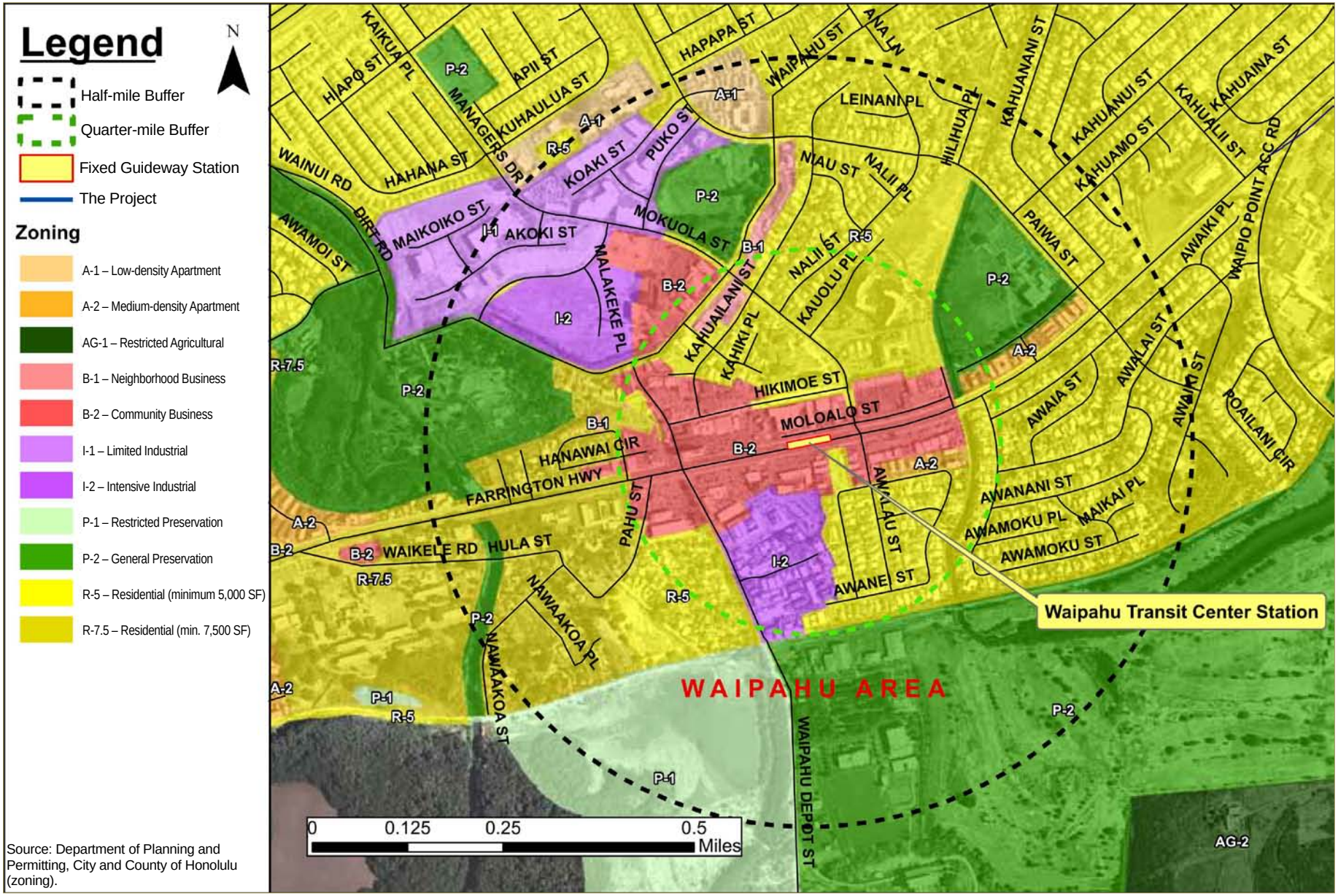
HART staff should work with the appropriate City agency to designate a portion of Mokuola Street for a kiss-and-ride and taxi zone. HART staff also should work with HDOT to "calm" Farrington Highway near the station entrances and provide improved crosswalks as appropriate. Large pedestrian volumes near the Waipahu Transit Center could create a demand for larger sidewalks along existing streets. New crosswalks should be added to Hikimoe and Moloalo Streets as well as Farrington Highway at Mokuola Street to facilitate the additional pedestrian crossings expected.

Waipahu Transit Center Station—Existing Land Use

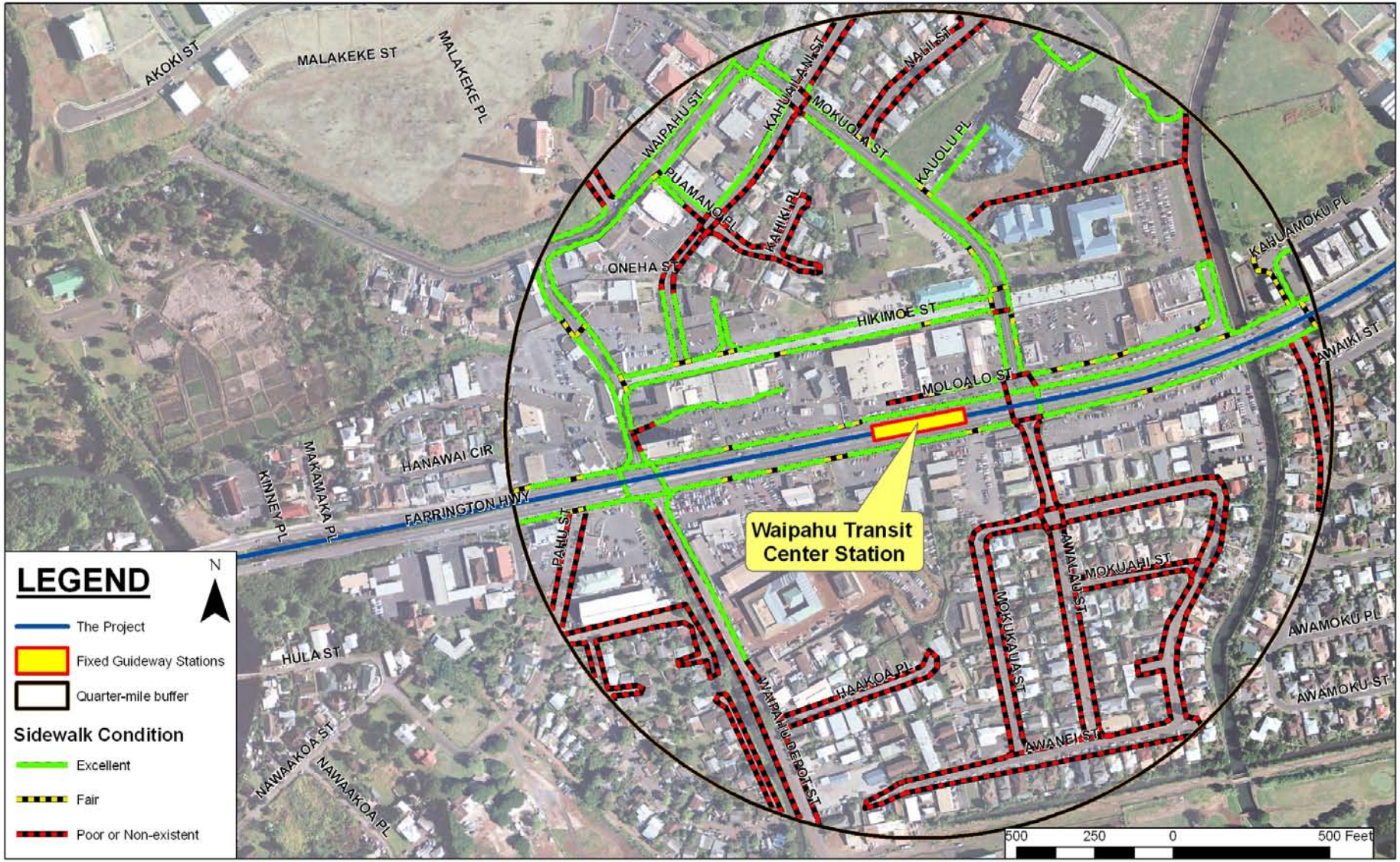


Source: Department of Planning and Permitting, City and County of Honolulu (existing land use field verified by Parsons Brinckerhoff).

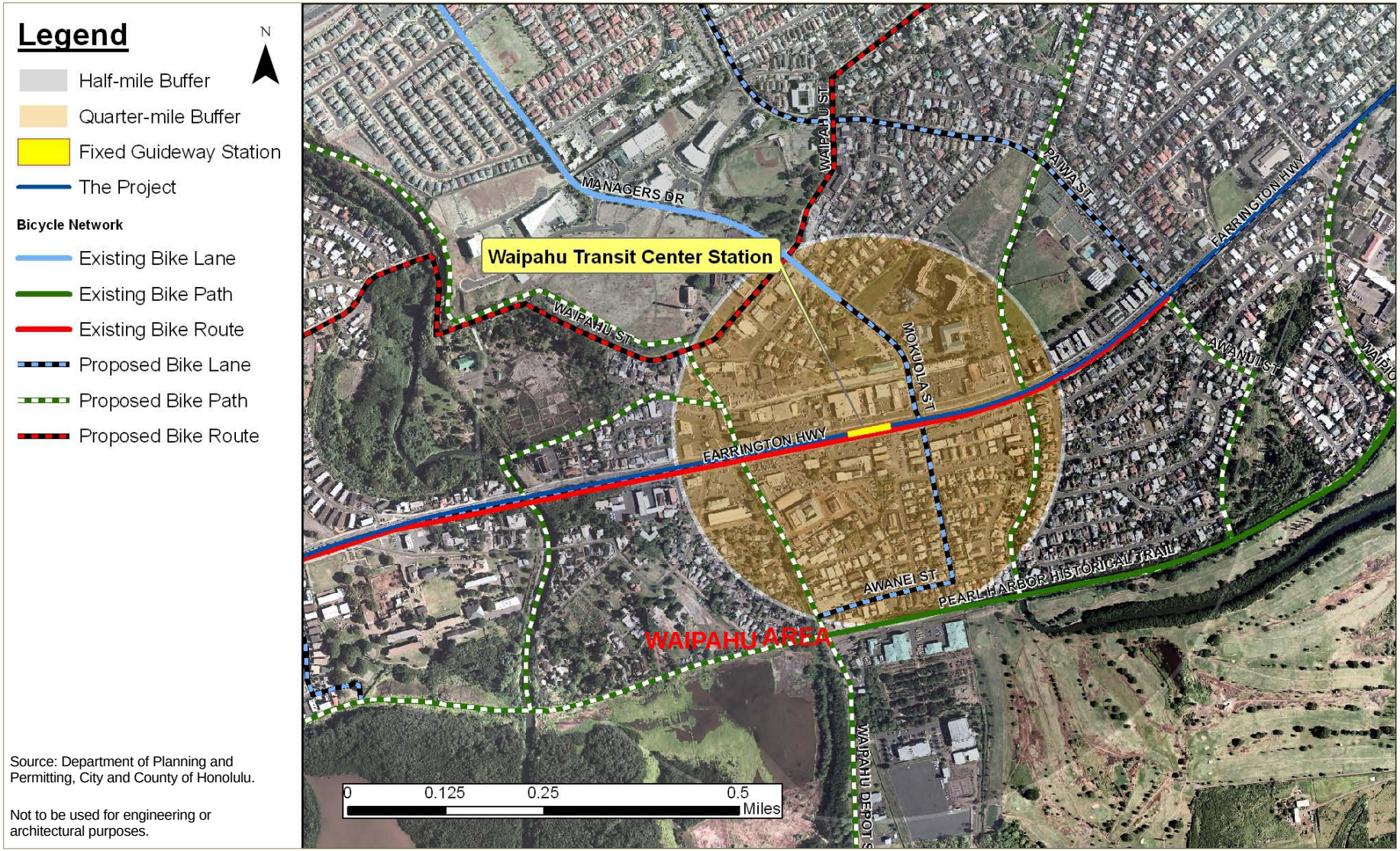
Waipahu Transit Center Station—Existing Zoning

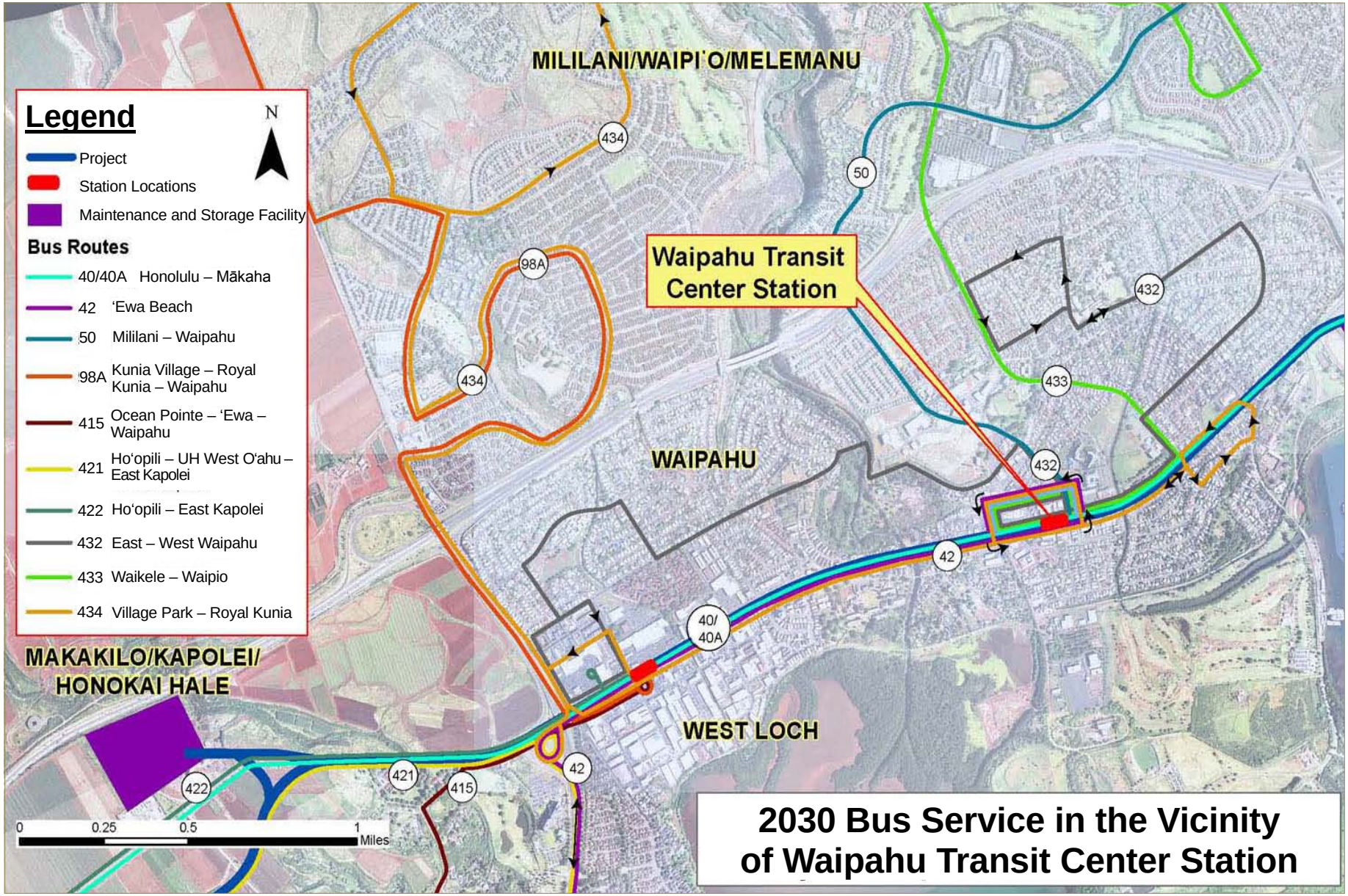


Waipahu Transit Center Station—Pedestrian Access

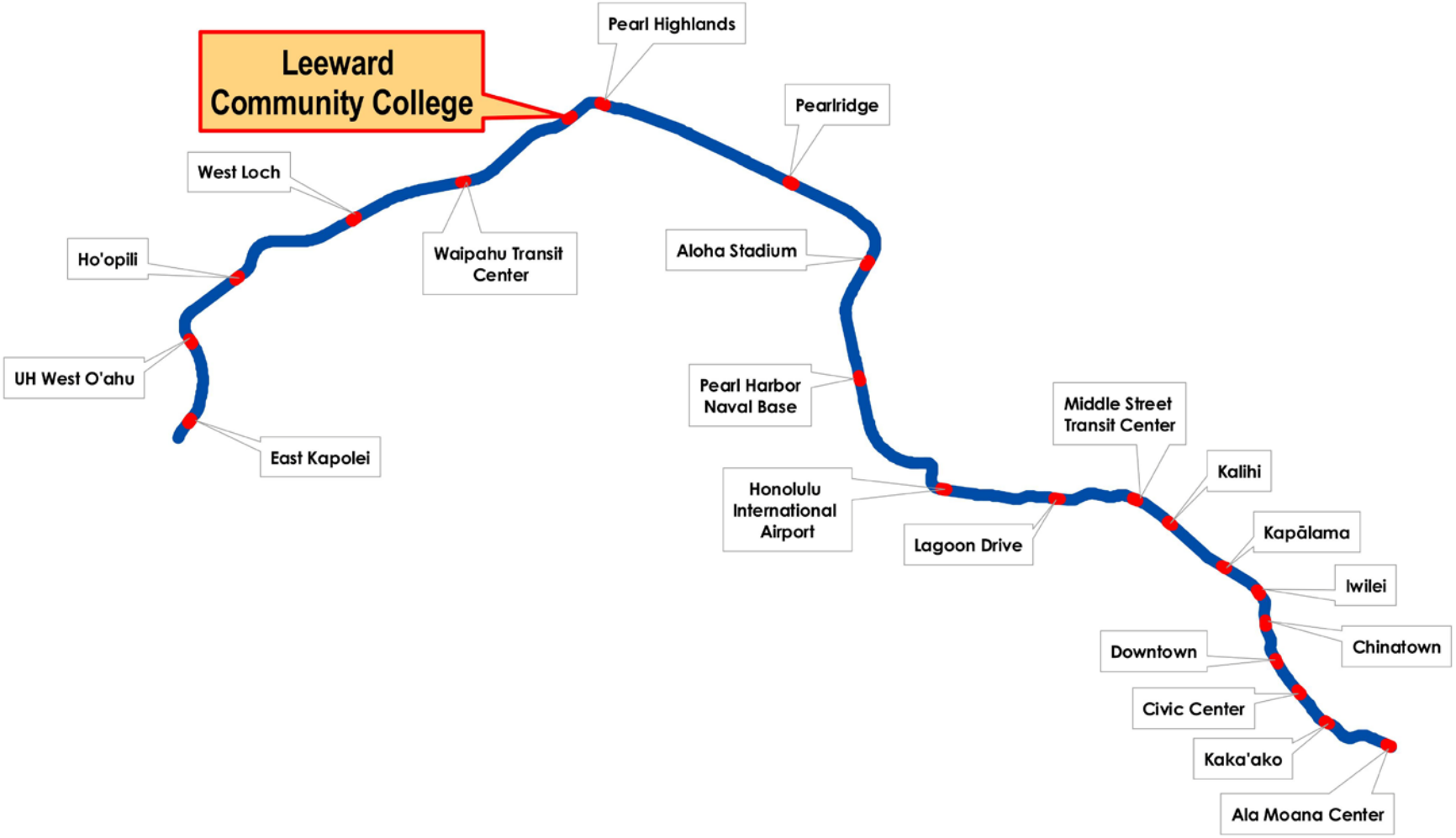


Waipahu Transit Center Station—Bicycle Access




Legend
N
Project
Station Locations
Maintenance and Storage Facility
Bus Routes
40/40A Honolulu – Mākaha
42 'Ewa Beach
50 Mililani – Waipahu
98A Kunia Village – Royal Kunia – Waipahu
415 Ocean Pointe – 'Ewa – Waipahu
421 Ho'opili – UH West O'ahu – East Kapolei
422 Ho'opili – East Kapolei
432 East – West Waipahu
433 Waikele – Waipio
434 Village Park – Royal Kunia
MILILANI/WAIPI'O/MELEMANU
Waipahu Transit Center Station
WAIPAHU
MAKAKILO/KAPOLEI/ HONOKAI HALE
WEST LOCH
0 0.25 0.5 1 Miles
2030 Bus Service in the Vicinity of Waipahu Transit Center Station

Leeward Community College Station (LC)



Summary

The Leeward Community College (LCC) Station will be located at the northern edge of the LCC campus. Access to the center-platform station will be from a single entrance through a below-grade pedestrian passageway.

Site Considerations and Access

Station location and nearby land use

- Maps showing station area land use and zoning are included in this report.
- LCC students and faculty will be the main users of the station, along with visitors and nearby residents and employees.
- Other land uses in the area include Waipahu High School, single family housing ‘Ewa of the station, and a vacant site that will be used for the Project maintenance and storage facility.
- Except for the LCC campus, the station site is isolated, being surrounded by Farrington, H-1, and Kamehameha Highways.
- The single station entrance will be located on the makai side of Ala ‘Ike Street campus.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown on the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- Walking or bicycling will be the dominant mode of access.
- Bicycle parking will be needed near the station entrance, with room for additional parking over time.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report (see Transit Access Map).
- TheBus will not directly serve the LCC station. However, local bus service will continue to be provided nearby.
- A loading zone for TheHandi-Van will be located near the station entrance (see Station Area Site Plan).

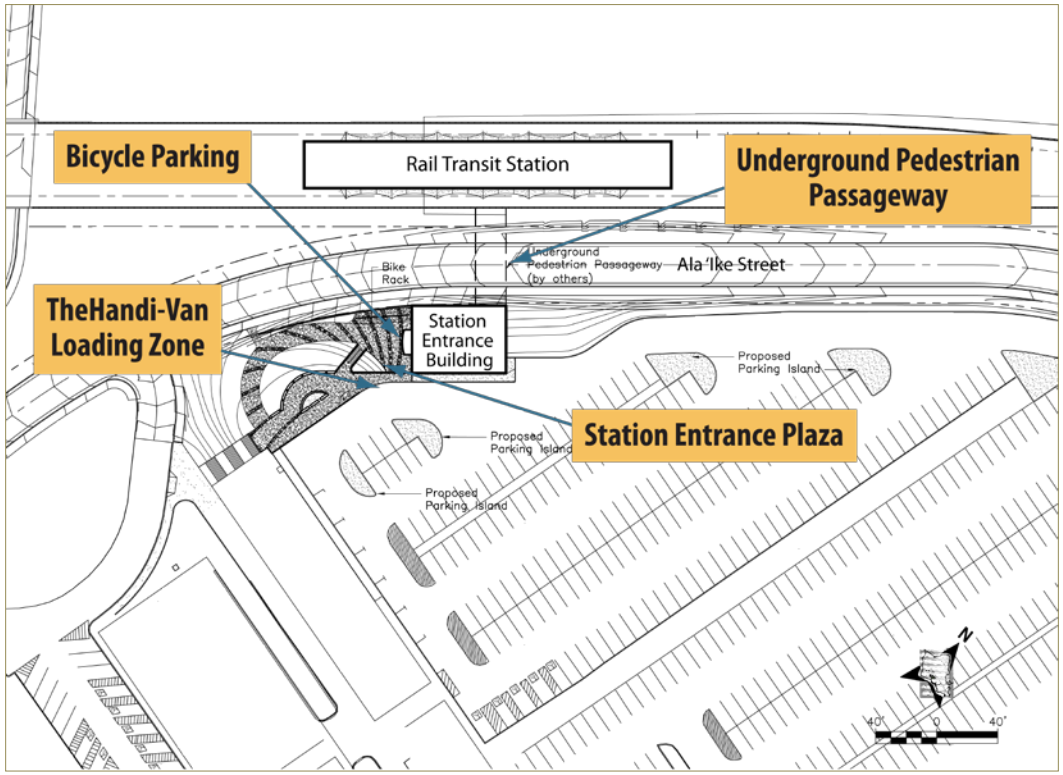
Kiss-and-ride and taxi

- A relatively small share of station access will be by kiss-and-ride.
- A kiss-and-ride loading zone will not be provided at the station.
- Taxi loading spaces are not planned at this station.

Park-and-ride

- A park-and-ride facility will not be provided at this station.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Leeward Community College station will have medium-level use, catering primarily to the college community. The station will have a **Center Platform** accessible from an underground gallery/walkway leading to a single entrance within the existing parking lot on the makai side of the guideway.

Pedestrian/Bicycle will be the dominant access mode. The station will see substantial demand coincide with campus activities, such as classes and special events (e.g., theater productions). The station design should be adequate for these pulses in demand.

Bike racks should be provided at the station entrance. Also, space should be preserved for future demand, and more racks or lockers should be added as needed.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions		**Other Vehicle Parking**	
45' Bus Loading Zone	0	Park-and-ride	0
60' Bus Loading Zone	0	Kiss-and-ride	0
Layover	0	Kiss-and-ride loading/unloading	0
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	0
Eastbound	0	Tour bus/private shuttle	0
Westbound	0	Supervisor	0
Northbound	0	Bicycle parking (opening/2030)	20/30
Southbound	0		

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	110
Alightings	390

Access Mode Daily Trips	
Walk/bike	2,850
Bus	300
Park-and-ride	0
Kiss-and-ride	40
Other	10
Total	3,200

A loading zone for **TheHandi-Van** service will be located near the station entrance. **TheBus** facilities will not be provided at the station. As indicated in the mode of access table, some people will continue to reach the LCC campus by bus rather than by train, using local stops on Farrington Highway.

Station Site Design Issues and Challeges

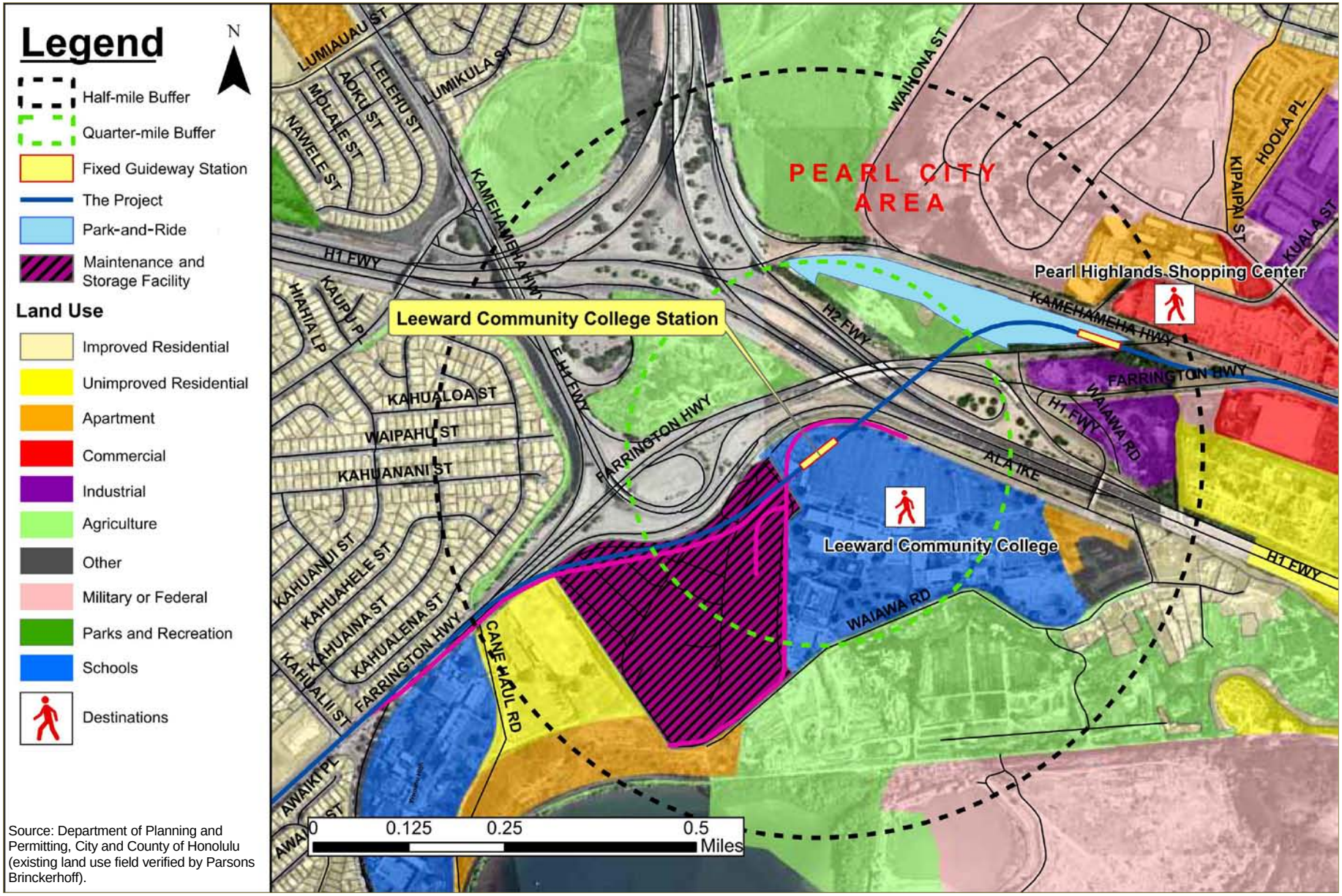
Create comfortable station entrance plaza

The station plaza will be designed to provide a highly visible, well-lit, active "front door" for the station. The plaza will be a comfortable pedestrian oasis in a car-oriented environment (LCC parking lot). It will provide visible, secure spaces for bicycle parking and efficient, easily accessible connections between the station entrance and the nearby campus.

Provide clear connections between station elements

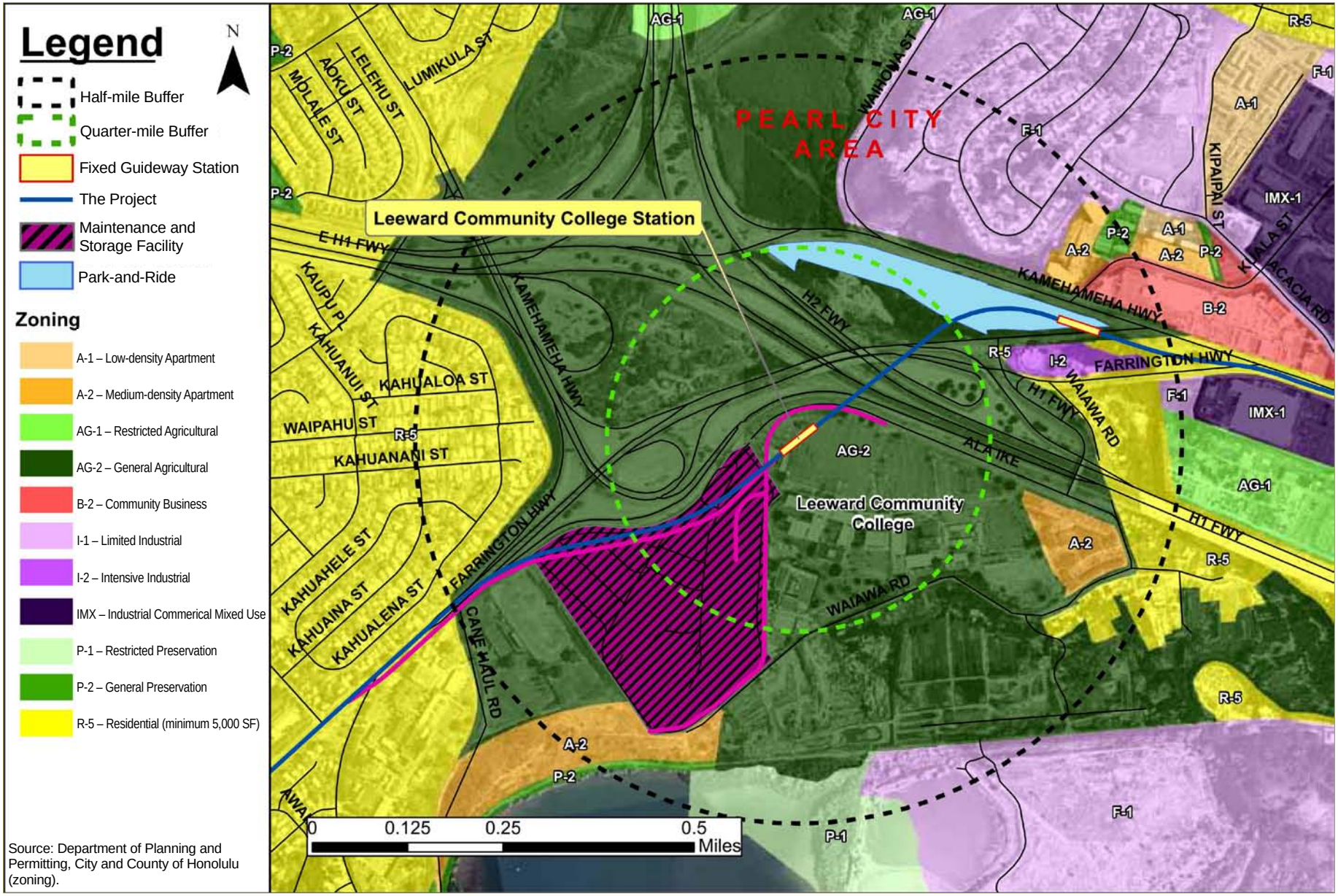
Safe and convenient pedestrian connections between various station elements will be needed. As much as possible, there should be a clear line of sight between the station entrance and the LCC campus. The station design will include transition zones that connect the existing campus parking lot and the station loading platform. Also, the station design will invoke a natural extension of the campus by introducing similar finishes and grade patterns as found on campus buildings. Connections between the station and campus can also be supported through a wayfinding system that guides patrons between LCC locations and the station entrance.

Leeward Community College Station—Existing Land Use

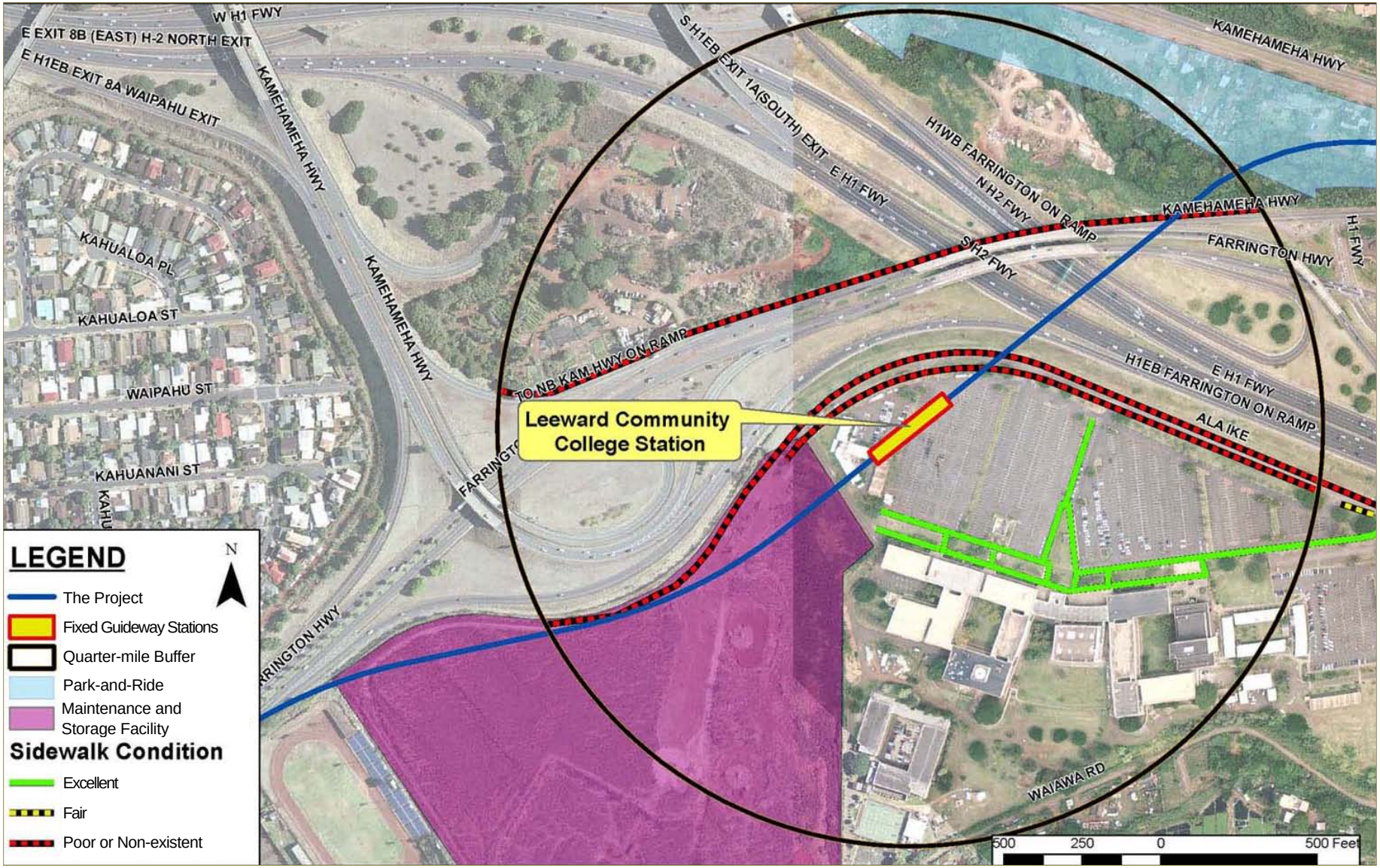


Source: Department of Planning and Permitting, City and County of Honolulu (existing land use field verified by Parsons Brinckerhoff).

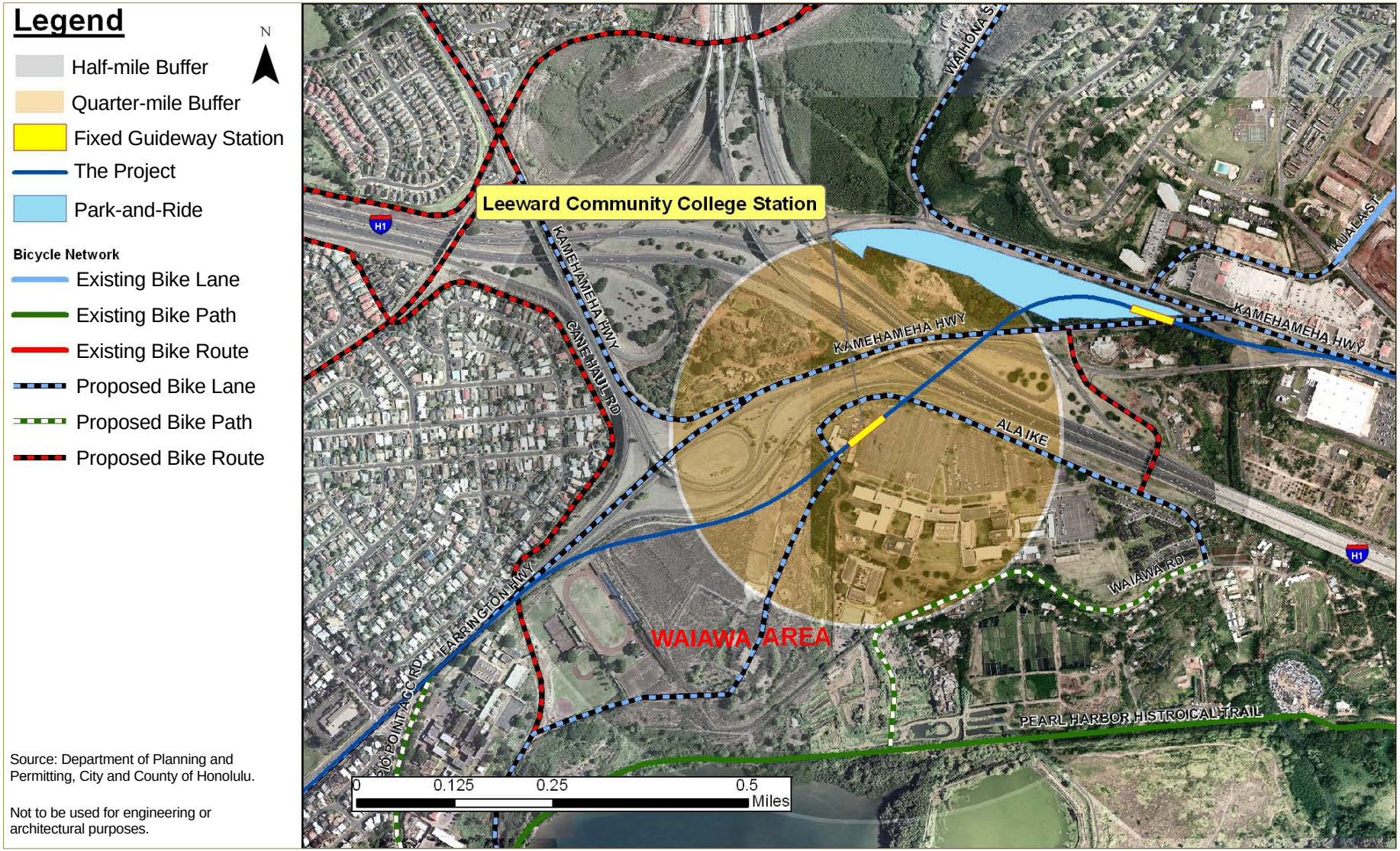
Leeward Community College Station—Existing Zoning

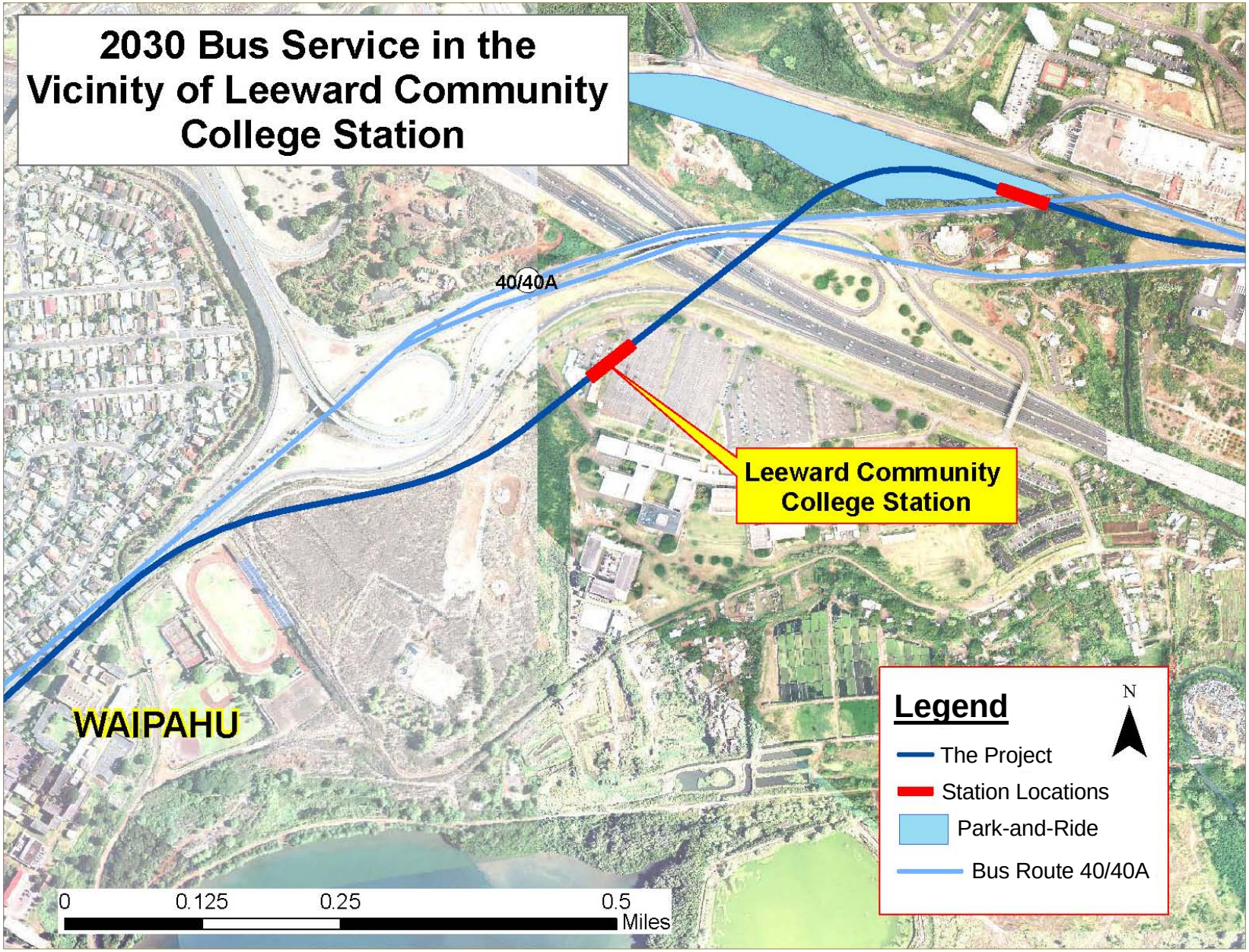


Leeward Community College Station—Pedestrian Access

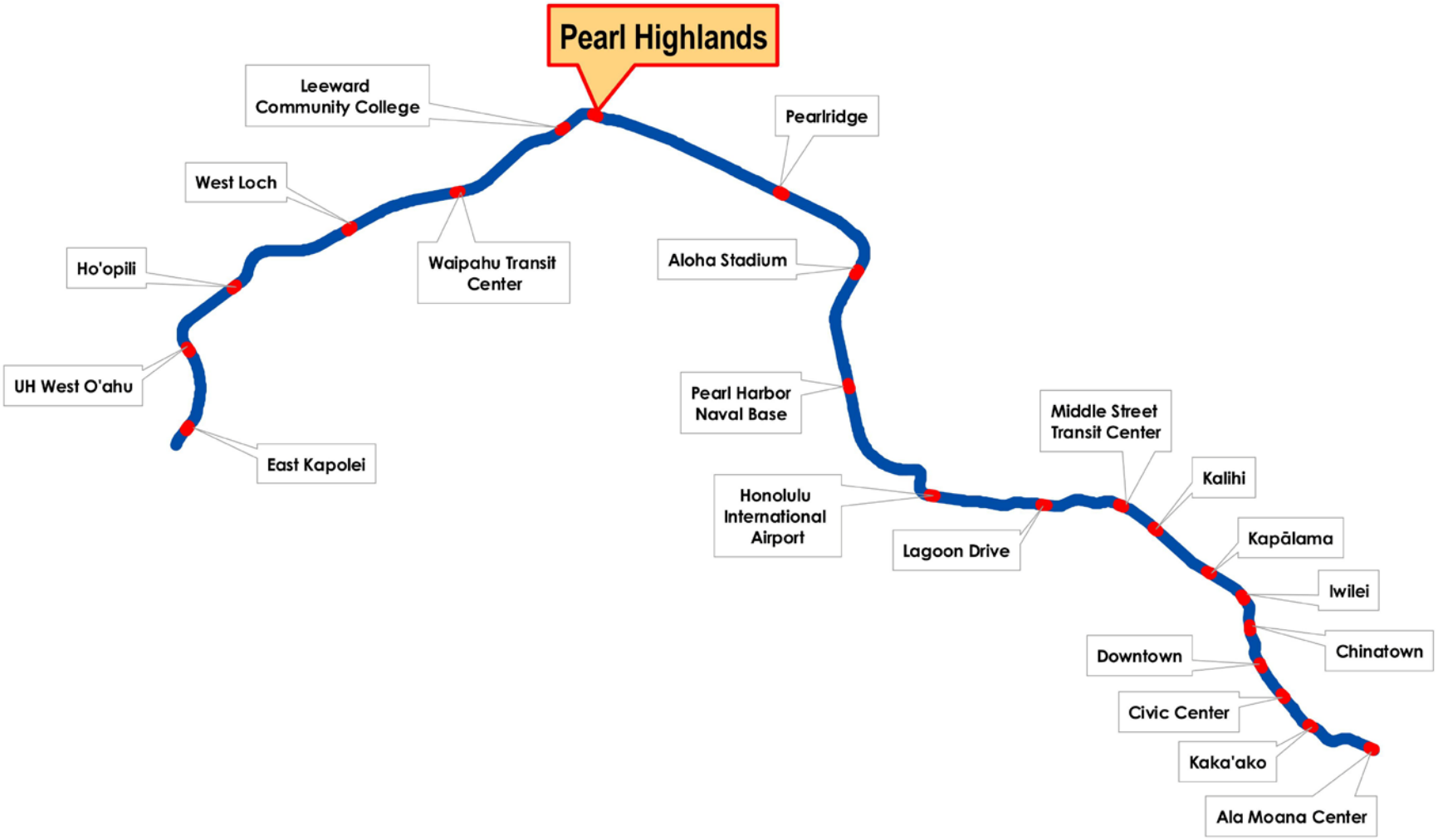


Leeward Community College Station—Bicycle Access




2030 Bus Service in the Vicinity of Leeward Community College Station
40/40A
Leeward Community College Station
WAIPAHU
Legend
N
The Project
Station Locations
Park-and-Ride
Bus Route 40/40A
0
0.125
0.25
0.5
Miles

Pearl Highlands Station (PH)



Summary

The Pearl Highlands Station will be located between Kamehameha and Farrington Highways near the H-1 and H-2 interchange. This station will serve as the major transfer point to rail service for Central O'ahu residents.

Site Considerations and Access

Station location and nearby land use

- Maps showing station area land use and zoning are included in this report.
- Nearby land uses include higher-density housing and "big-box" commercial/retail.
- Station site is surrounded by wide and busy highways, actively flowing Waiawa Stream, and very steep sloping terrain.
- Wide and busy streets present barriers for pedestrian movement to/from the station.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown on the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- About 15 percent of total daily demand at the station will involve walk and bicycle.
- Pedestrian concourses are planned to provide easy access from surrounding areas.
- Bicycle parking will be provided at multiple locations within the station facility.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report (see Transit Access Map).
- About half of total station demand will be from bus transfers.
- A transit center incorporated into the station will include six active bus loading zones and three bus layover positions (see Station Area Site Plan).
- On-street bus stops will provide additional access to the station.
- TheHandi-Van loading area will be located at the transit center near one of the station entrances (see Station Area Site Plan).

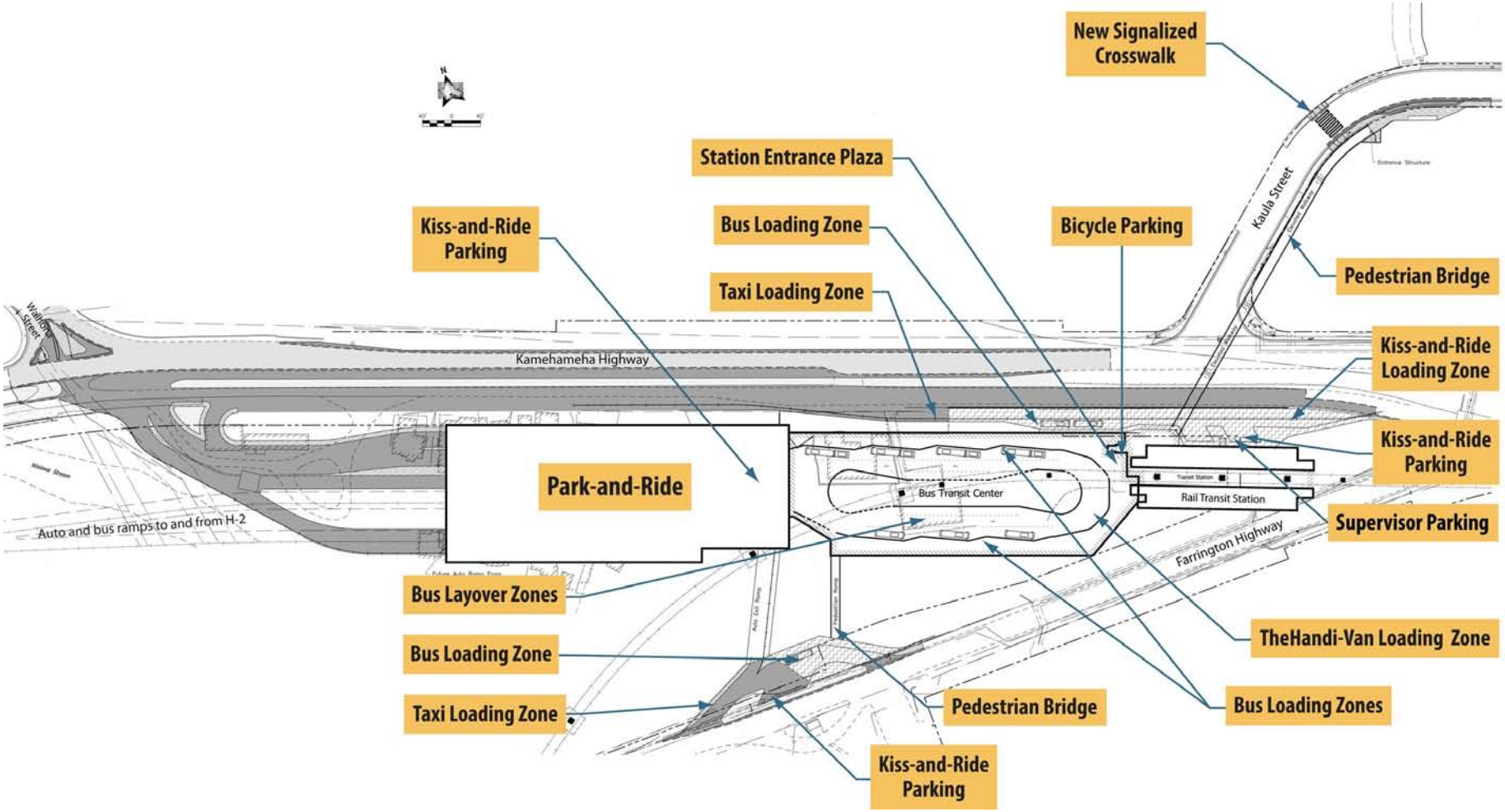
Kiss-and-ride and taxi

- Short-term kiss-and-ride parking stalls will be provided at three locations for easy access.
- Kiss-and-ride and taxi loading zones will be provided at multiple locations in the station area.

Park-and-ride

- A 1,600 stall park-and-ride facility will be provided at this station. This park-and-ride facility will have direct access to the H-2 Freeway via grade-separated ramps.
- The park-and-ride facility will be connected to the rail station via an elevated walkway.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Pearl Highlands will be a heavily used station with design that reflects a very high projected volume and share of bus and park-and-ride trips (many originating in the Central O'ahu communities off the H-2 Freeway). The station will have **Side Platforms** accessible from one primary entrance that will be connected to multiple access points, including the bus transit center, parking garage, Kamehameha Highway and Farrington Highway.

Most of **TheBus** loading zones will be located at the off-street transit center; however, two on-street bus zones (one each on Kamehameha and Farrington Highways) will also be provided. Loading zones for **TheHandi-Van** service will be provided at the transit center and on Kamehameha Highway.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions [1]		**Other Vehicle Parking**	
45' Bus Loading Zone	0	Park-and-ride	1,600
60' Bus Loading Zone	6	Kiss-and-ride	20
Layover	5	Kiss-and-ride loading/unloading	2
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	2
Eastbound	1	Tour bus/private shuttle	0
Westbound	1	Supervisor	1
Northbound	0	Bicycle parking (opening/2030)	20/110
Southbound	0		

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

[1] At transit center located 'Ewa of the station

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	3,160
Alightings	270

Access Mode Daily Trips	
Walk/bike	1,500
Bus	5,410
Park-and-ride	3,110
Kiss-and-ride	590
Other	0
Total	10,610

User-friendly **Pedestrian/Bicycle** concourses or street-level crossings will provide access between Kamehameha and Farrington Highways and station entrances. Bicycle racks will be provided at the mauka station entrance on Kuala Street, near the entrance on Kamehameha Highway, and on the bus transit center level. Space should be preserved for a large future demand and more racks or lockers should be added as needed.

The Pearl Highlands station is designed to provide convenient access for **Park-and-Ride** traffic arriving from the H-2 Freeway and other highways. This station will have the largest parking facility in the system to serve the heavy demand coming from Central O'ahu.

Station Site Design Issues

Serving multiple transportation functions

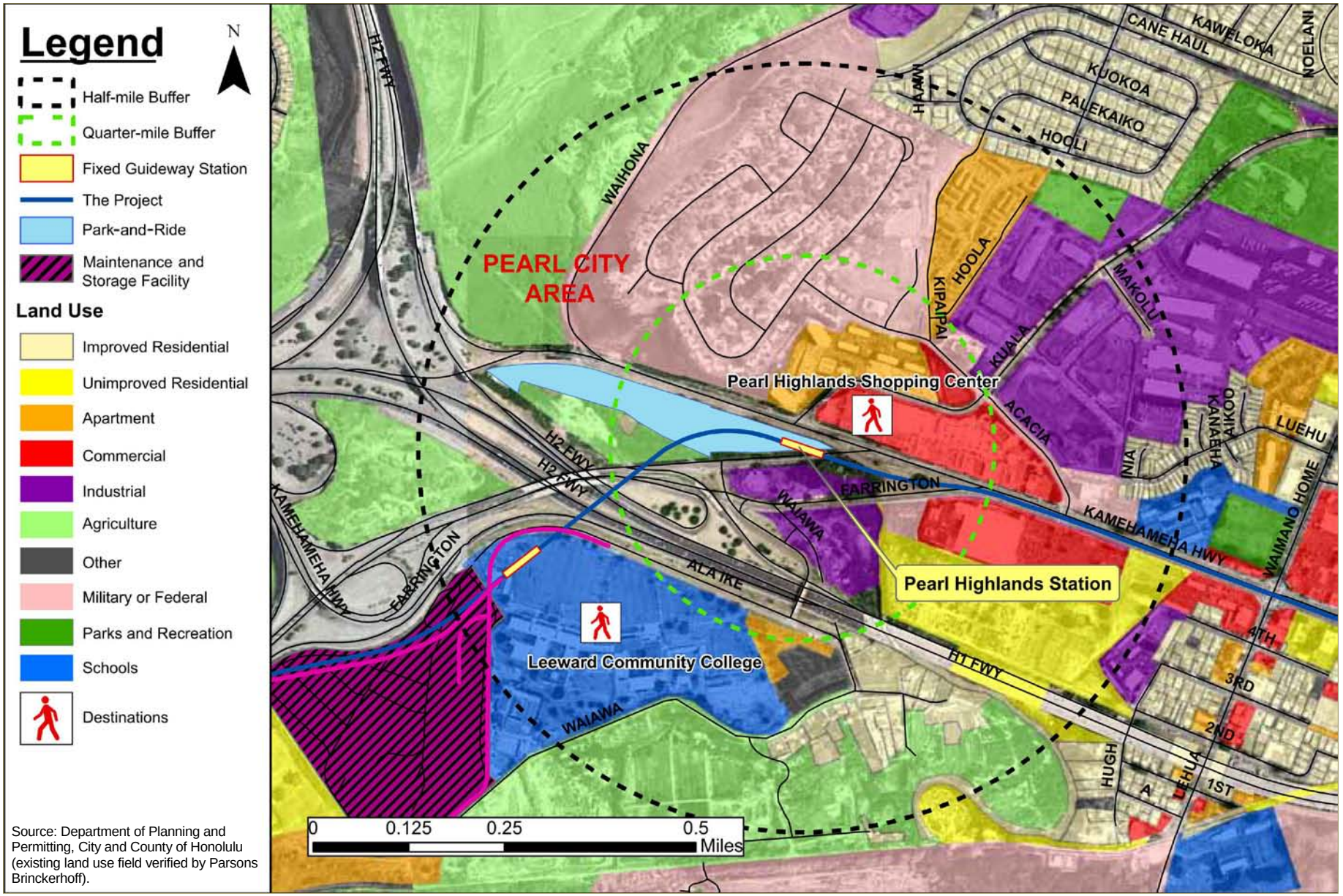
Pearl Highlands Station will be a complex, multi-modal transportation center, with multiple functions and levels, serving a variety of modes. A successful design will integrate the various functions and ensure they interact successfully, minimizing patrons' overall walking distance, crowding, and delay.

Safe and convenient pedestrian connections between various station elements will be needed. As much as possible, there should be clear lines of sight between station entrances and links to the park-and-ride facility, transit center, and nearby community. These connections should be supported by features such as clear wayfinding that guide patrons, including those using the park-and-ride facility, to major station components.

Environmental Station Site Design Criteria

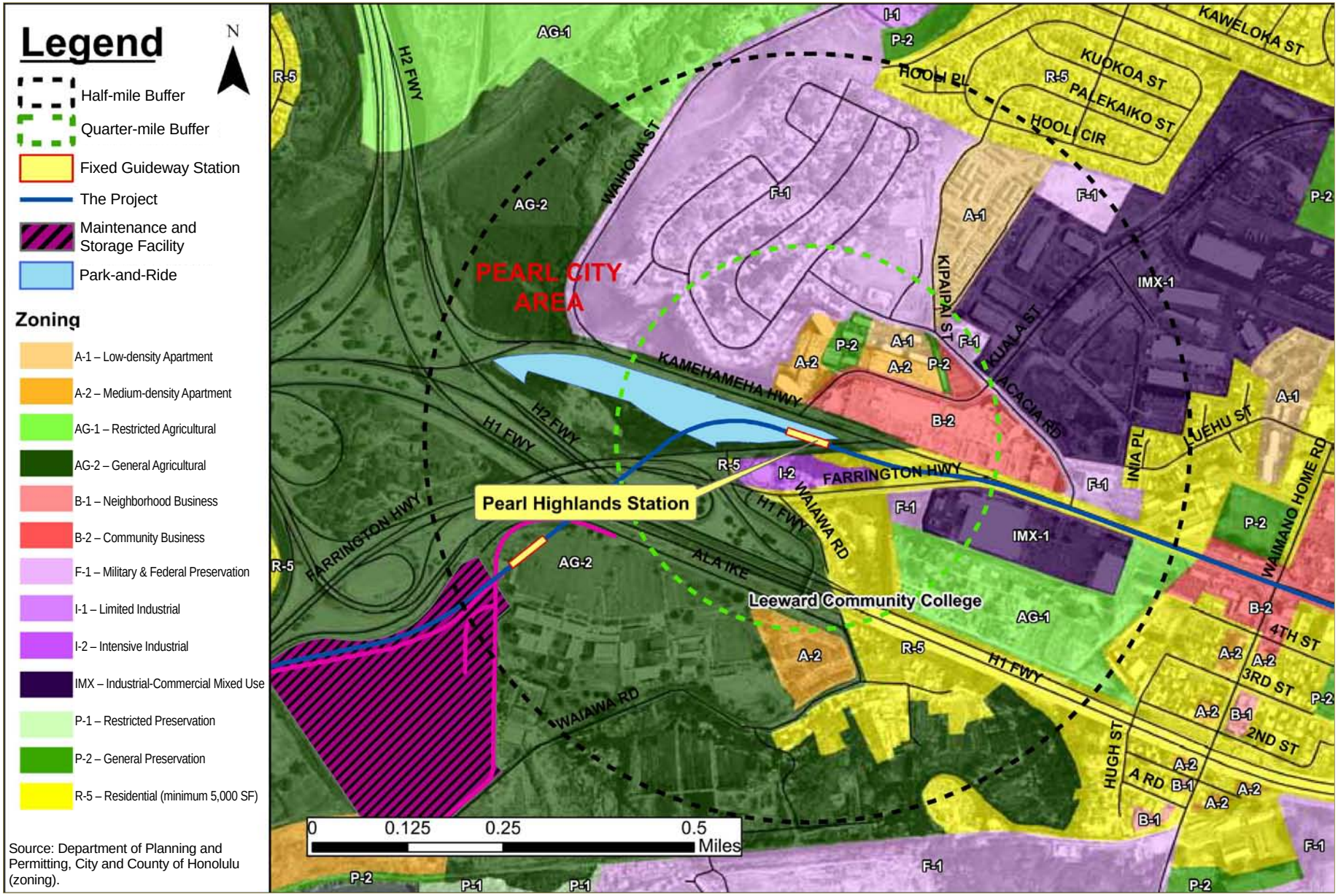
Waiawa Stream flows through the site. Stream and habitat restoration will be completed in accordance with the Clean Water Act Section 401 permit and the Clean Water Act Section 404 permit. This station will be elevated above the floodplain by piers. These piers have been designed to minimize floodplain impacts and will comply with current flood zone regulations.

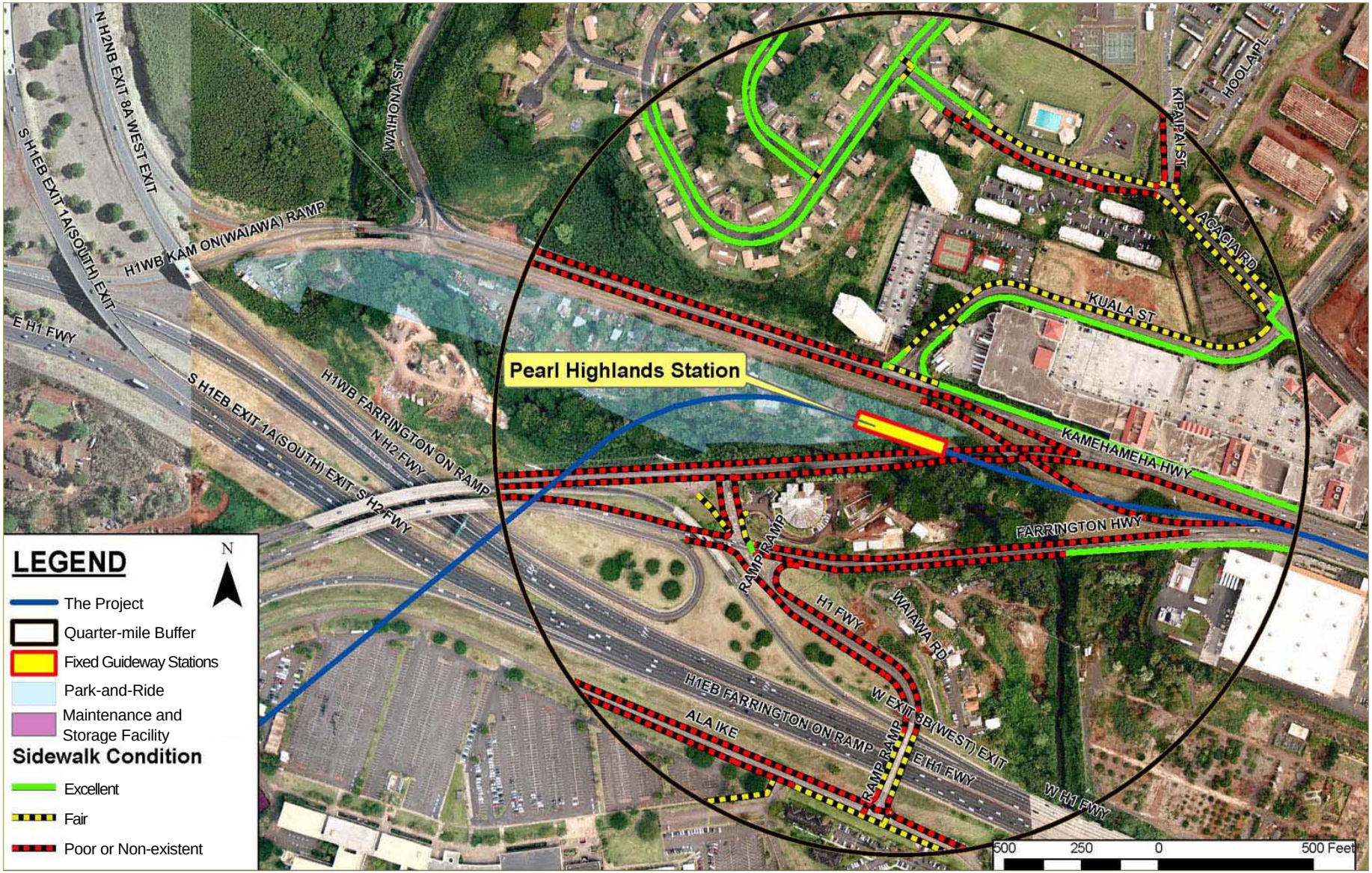
Pearl Highlands Station—Existing Land Use



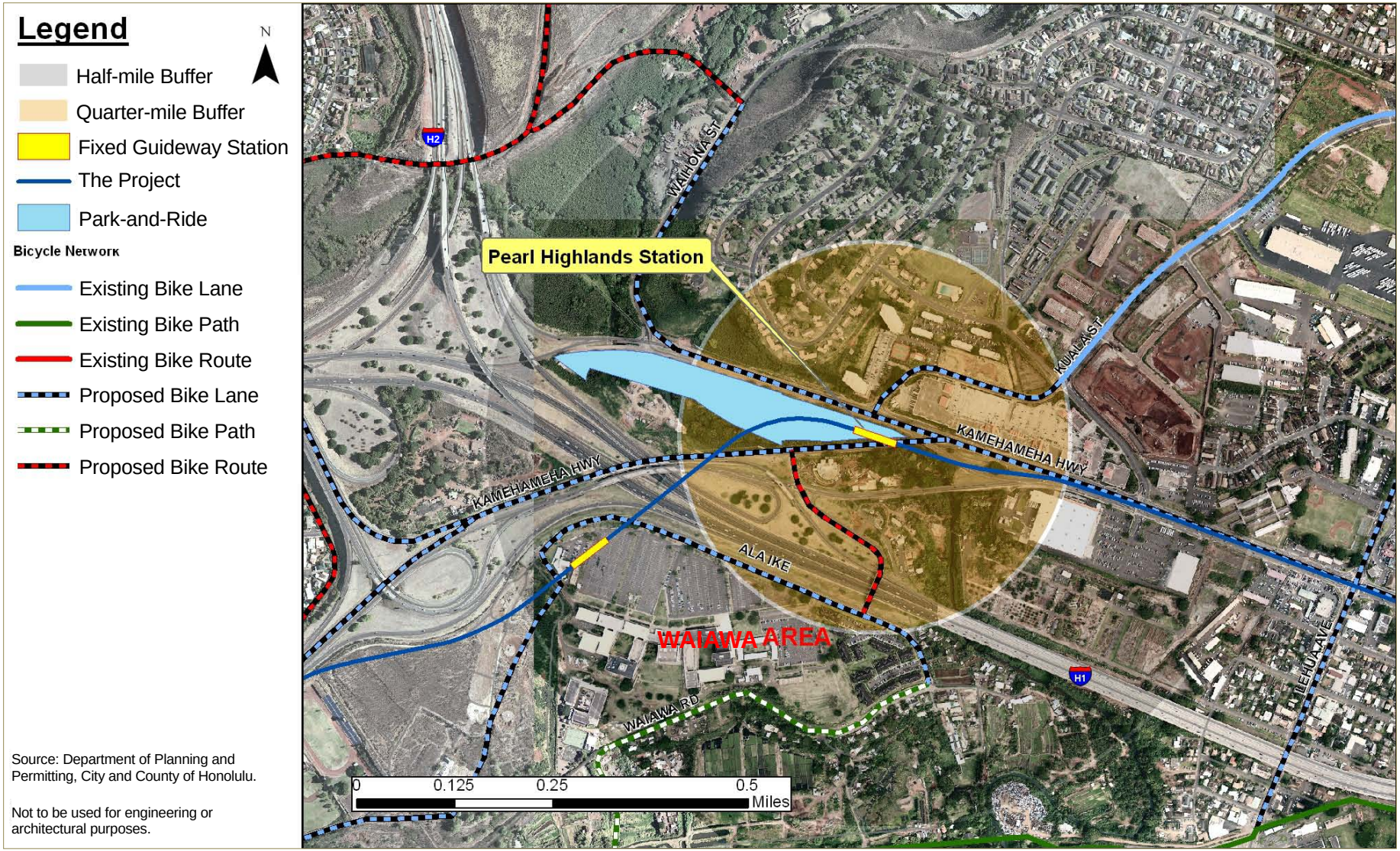
Source: Department of Planning and Permitting, City and County of Honolulu (existing land use field verified by Parsons Brinckerhoff).

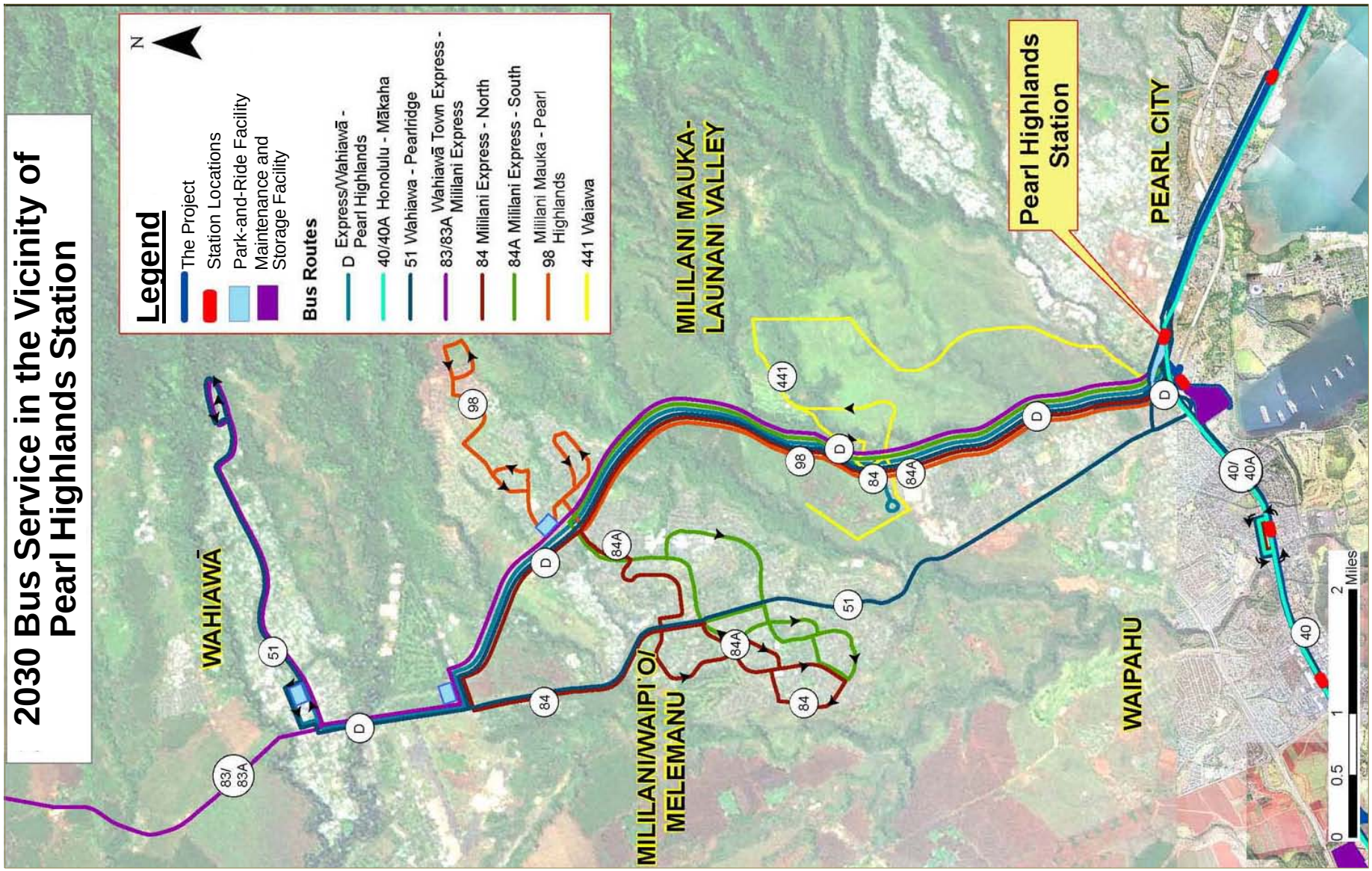
Pearl Highlands Station—Existing Zoning



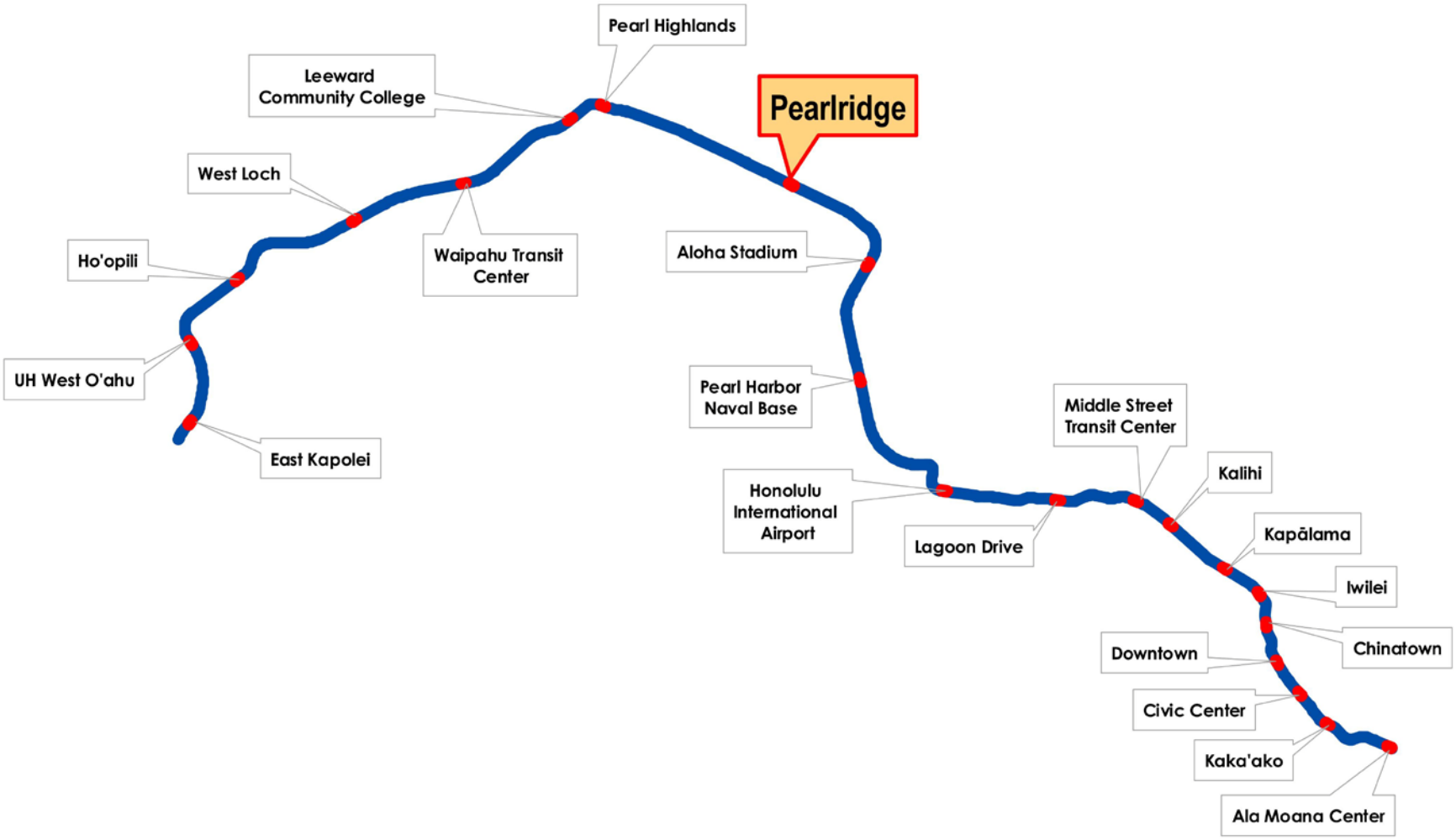

Pearl Highlands Station
N H2NB EXIT 8A WEST EXIT
S H1EB EXIT 1A(SOUTH) EXIT
WAIHONA ST
H1WB KAM ON(WAIAWA) RAMP
E H1 FWY
H1WB FARRINGTON ON RAMP
N H2 FWY
S H1EB EXIT 1A(SOUTH) EXIT
S H2 FWY
KIPAIPAI ST
HOOLAI PL
ACACIA RD
KUALA ST
KAMEHAMEHA HWY
FARRINGTON HWY
RAMP
RAMP
H1 FWY
WAIAWA RD
H1EB FARRINGTON ON RAMP
W EXIT 8B(WEST) EXIT
ALA IKE
RAMP
E H1 FWY
W H1 FWY
LEGEND
N
The Project
Quarter-mile Buffer
Fixed Guideway Stations
Park-and-Ride
Maintenance and Storage Facility
Sidewalk Condition
Excellent
Fair
Poor or Non-existent
500
250
0
500 Feet

Pearl Highlands Station—Bicycle Access




2030 Bus Service in the Vicinity of Pearl Highlands Station
Legend
The Project
Station Locations
Park-and-Ride Facility
Maintenance and Storage Facility
Bus Routes
D Express/Wahiawā - Pearl Highlands
40/40A Honolulu - Mākaha
51 Wahiawa - Pearlridge
83/83A Wahiawā Town Express - Mililani Express
84 Mililani Express - North
84A Mililani Express - South
98 Mililani Mauka - Pearl Highlands
441 Waiawa
N
WAHIAWĀ
MILILANI/WAIPI'O/ MELEMANU
MILILANI MAUKA-LAUNANI VALLEY
WAIPAHU
PEARL CITY
Pearl Highlands Station
0 0.5 1 2 Miles

Pearlridge Station (PR)



Summary

The Pearlridge Station will be located on Kamehameha Highway in Pearl City. Station entrances will be located on either side of Kamehameha Highway.

Site Considerations and Access

Station location and nearby land use

- Maps showing station area land use and zoning are included in this report.
- Urban/suburban area containing a mix of commercial, light industrial, retail, and residential land uses.
- The area is expected to change over time to more dense and transit-supportive activities.
- The station will be located on a busy highway near the center of Pearl City.
- Nearby Pearlridge Shopping Center is a major attraction.
- Nearby Sumida Watercress Farm is a protected natural resource.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown on the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- High pedestrian volumes associated with bus/train transfers are anticipated.
- Pearl Harbor Bike Trail is located makai of the station.
- Redevelopment in the station area will provide opportunities for enhanced station access for pedestrians and bicyclists.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report (see Transit Access Map).
- Some buses will stop on Kamehameha Highway in front of the station. Other buses (feeder routes from nearby mauka neighborhoods) will need a layover area and will likely serve the station from Kaonohi Street (see Station Area Site Plan).
- TheHandi-Van loading zones will be in front of each station entrance.

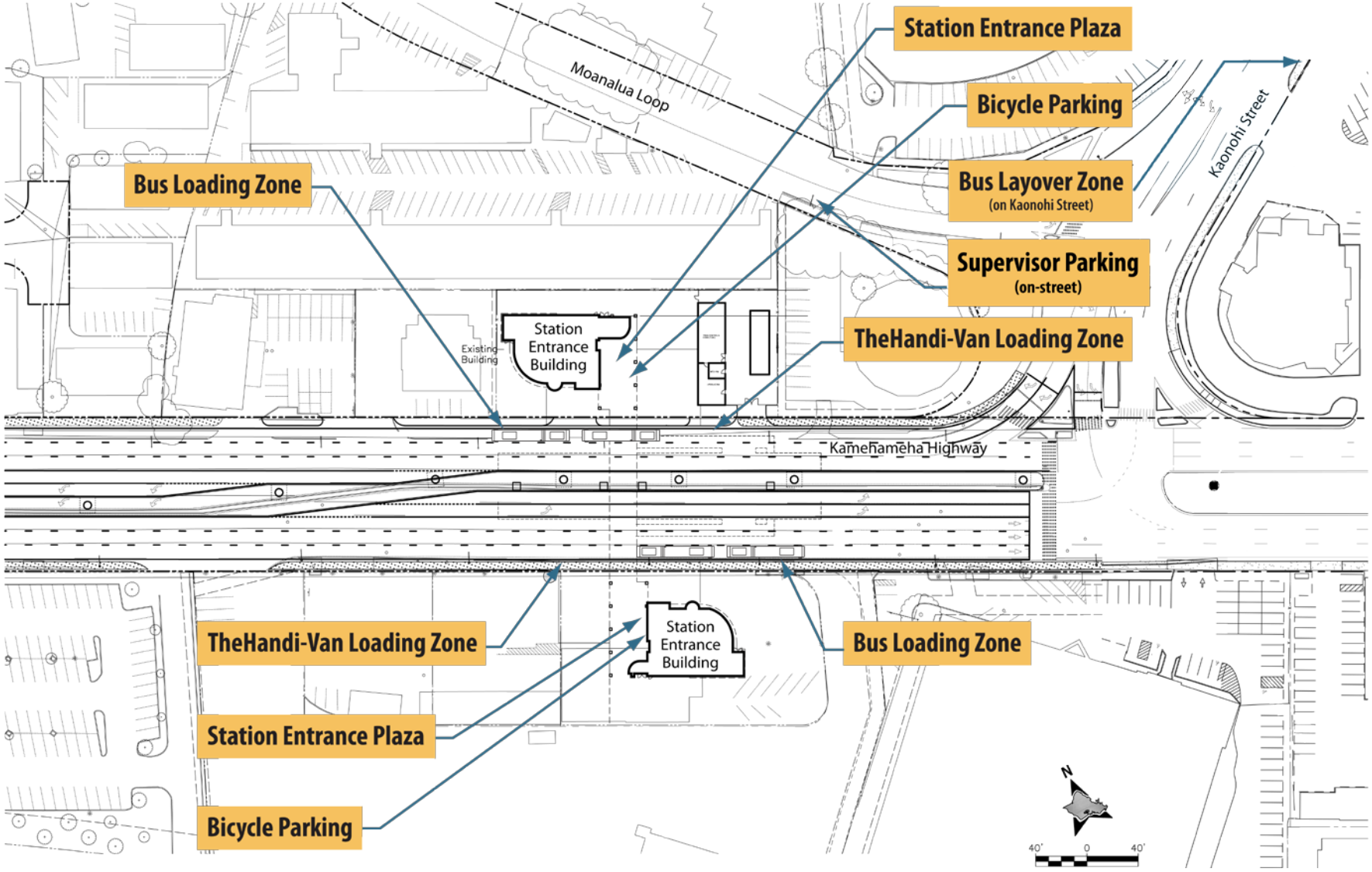
Kiss-and-ride and taxi

- Kiss-and-ride and taxi zones are not planned at this station.

Park-and-ride

- A park-and-ride facility will not be provided at this station.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Pearlridge station will have medium-level usage with a high projected volume and share of connecting bus trips. The station will have **Side Platforms** accessible from two entrances—one on either side of Kamehameha Highway—and connected by an overhead walkway.

TheBus will be the dominant access mode with about 90 percent of demand involving transfers between bus and train. Bus shelters and other elements should be designed to blend in with the rail station. The makai entrance plaza should be designed to connect to a potential future bus transit center. Some layovers and transfers will take place on the Koko Head side of Kaonohi Street.

Pedestrian and bicycle access will be coming from surrounding neighborhoods and destinations. Coordination will be needed with the City and State to improve sidewalks and crosswalks and to calm traffic along Kamehameha Highway. The makai station entrance plaza should be designed to facilitate a future link to the Pearl Harbor Bike Path. Bike racks will be needed at each station entrance plaza (initially at least 10 at each). Also, space should be preserved for future demand and more racks or lockers should be added as needed.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions [1]		**Other Vehicle Parking**	
45' Bus Loading Zone	4	Park-and-ride	0
60' Bus Loading Zone	2	Kiss-and-ride	0
Layover	0	Kiss-and-ride loading/unloading	0
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	2
Eastbound	2	Tour bus/private shuttle	0
Westbound	2	Supervisor	1
Northbound	0	Bicycle parking (opening/2030)	20/110
Southbound	0		

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

[1] To be provided in an off-street facility or on Kaonohi Street

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	750
Alightings	630

Access Mode Daily Trips	
Walk/bike	490
Bus	5,080
Park-and-ride	0
Kiss-and-ride	230
Other	60
Total	5,860

Station Site Design Issues and Challenges

Create comfortable entrance plazas and connections to bus

Most of the demand at this station will involve bus transfers that will occur either on Kamehameha Highway or on Kaonohi Street. To accommodate the large number of transfers, It will be important for the station design to include pedestrian plazas that provide a safe and comfortable transition between sidewalks along Kamehameha Highway and each station entrance. Station entrance plazas should be comfortable pedestrian environments, and provide visible, secure spaces for bicycle parking, and efficient, easily accessible connections between station entrances, buses, and nearby developments.

Provide clear connections between station elements

Safe and convenient pedestrian connections between various station elements will be needed, with a clear line of sight between the station entrances and bus stops and sidewalks. The design should reflect the large pedestrian volumes walking between bus stops and station entrances.

Bus transit center location to be determined

There is a plan for a future off-street bus transit center at this station on the makai side of Kamehameha Highway. This transit center would serve the large number of transfers expected to take place at this station. However, the bus transit center is not part of this Project and may not be built prior to the rail station opening. Some buses may instead stop on Kamehameha Highway in front of the station, while others will stop and lay over on Kaonohi Street.

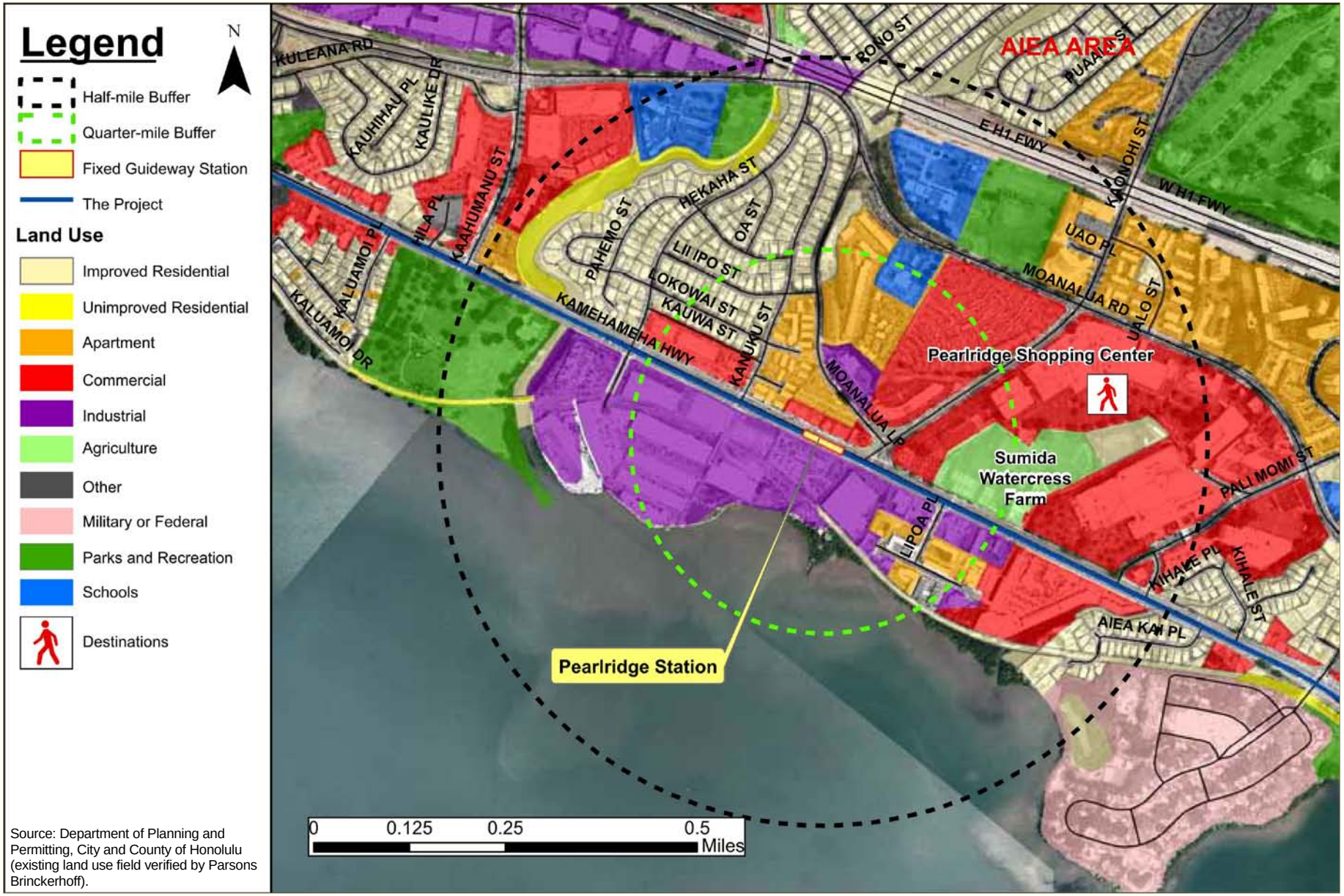
Connect to bus layover zone on Kaonohi Street

Many rail passengers may need to make a connection to buses on Kaonohi Street, mauka of Kamehameha Highway. Pedestrian improvements (wider sidewalks, improved crosswalks) should be included in the station design to accommodate this transfer.

Kiss-and-ride loading zone on Kaonohi Street or other location

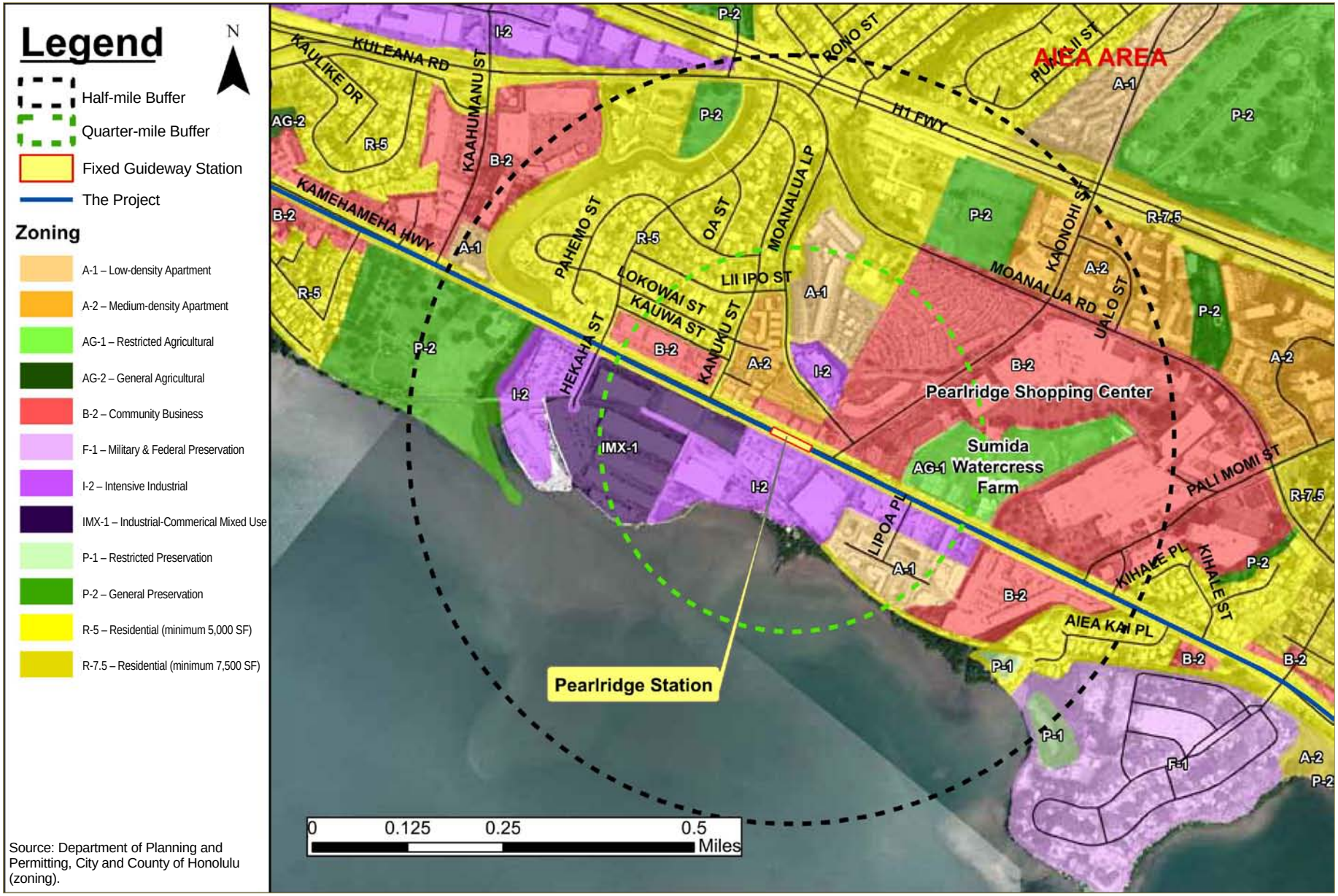
HART staff should work with staff from other City agencies to designate a location near the station for a kiss-and-ride loading zone.

Pearlridge Station—Existing Land Use



Source: Department of Planning and Permitting, City and County of Honolulu (existing land use field verified by Parsons Brinckerhoff).

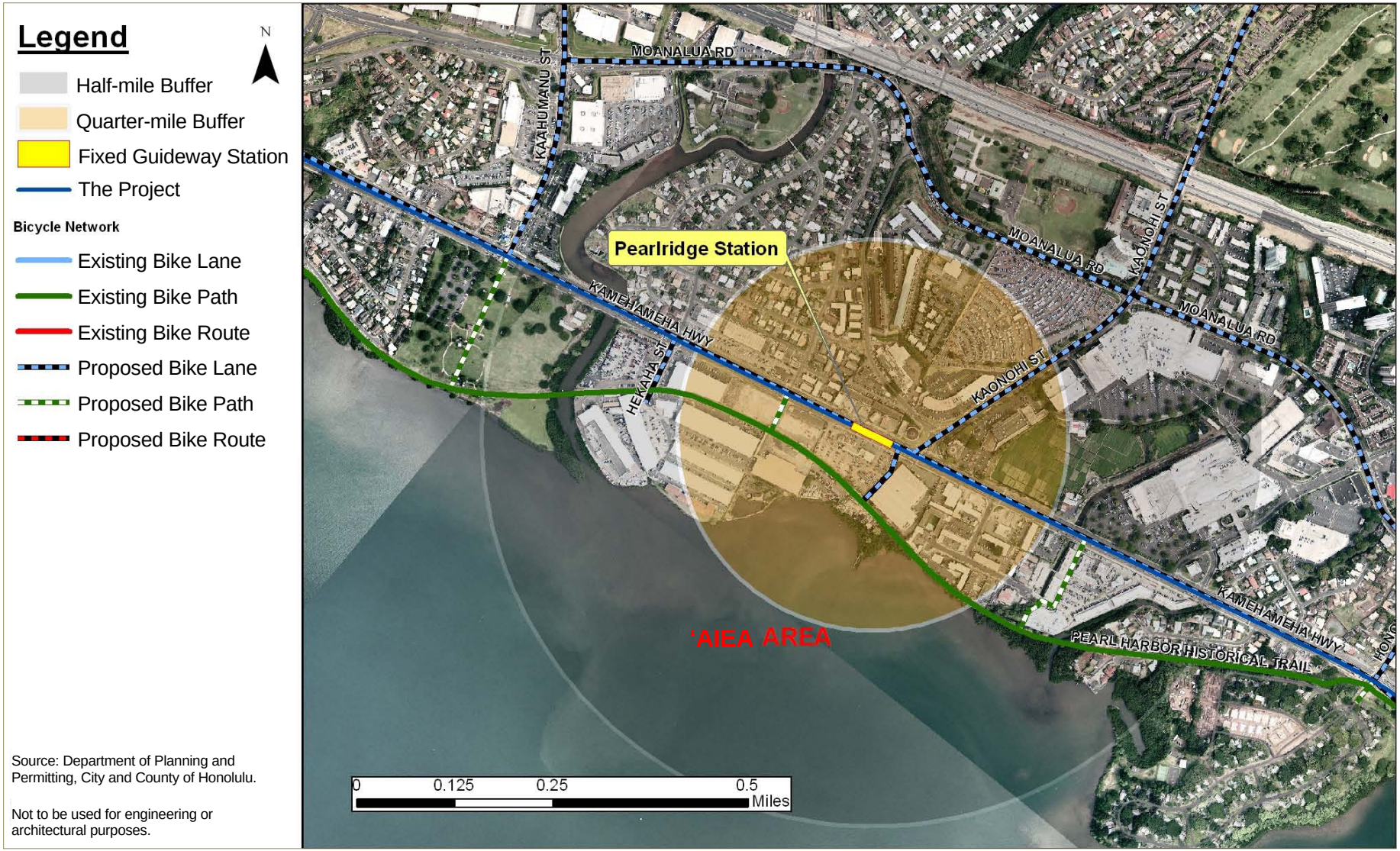
Pearlridge Station—Existing Zoning

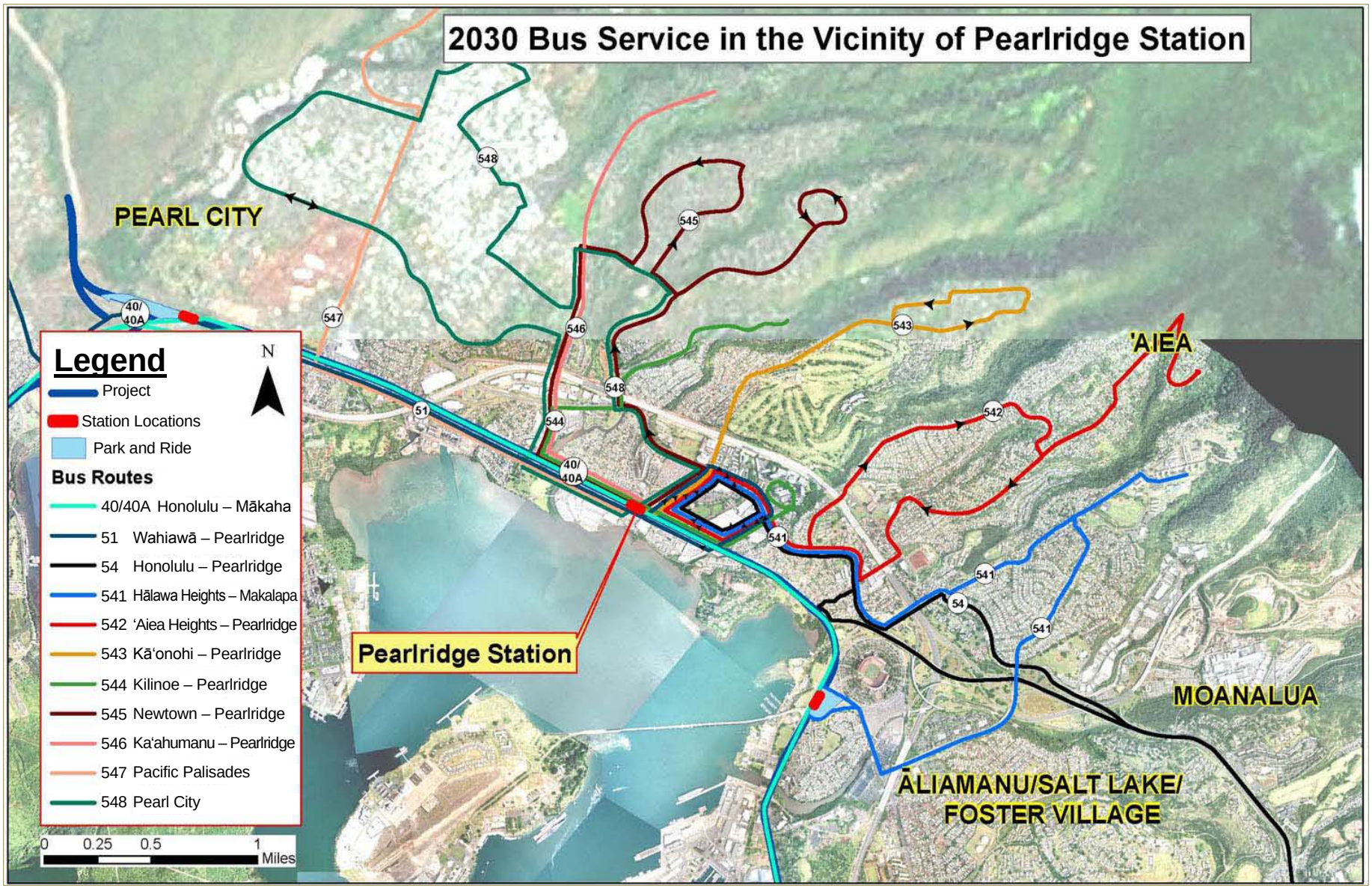


Source: Department of Planning and Permitting, City and County of Honolulu (zoning).

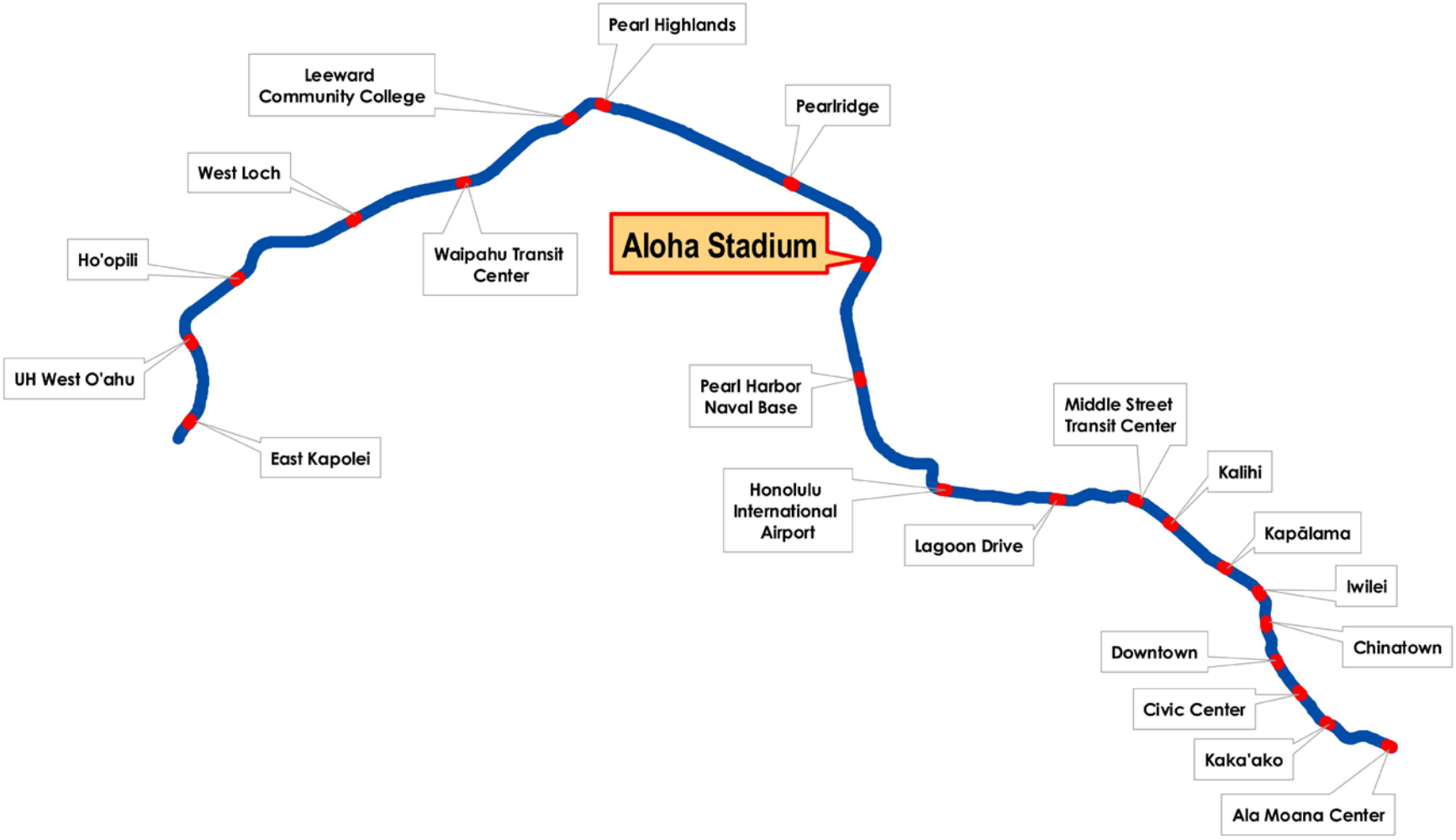

OLEPE LP
LIHIPO ST
PAHEMO ST
MOANALUA RD
LOKOWAI ST
KAUWA ST
LOKOWAI PL
HEKAHA ST
KANUKU ST
KAMEHAMEHA HWY
MOANALUA LP
KAONOHI ST
Pearlridge Station
LIPOA PL
LEGEND
N
The Project
Fixed Guideway Stations
Quarter-mile buffer
Sidewalk Condition
Excellent
Fair
Poor or Non-existent
500
250
0
500 Feet

Pearlridge Station—Bicycle Access




2030 Bus Service in the Vicinity of Pearlridge Station
PEARL CITY
'AIEA
MOANALUA
ĀLIAMANU/SALT LAKE/
FOSTER VILLAGE
Pearlridge Station
Legend
N
Project
Station Locations
Park and Ride
Bus Routes
40/40A Honolulu – Mākaha
51 Wahiawā – Pearlridge
54 Honolulu – Pearlridge
541 Hālawa Heights – Makalapa
542 ʻAiea Heights – Pearlridge
543 Kāʻonohi – Pearlridge
544 Kilinoe – Pearlridge
545 Newtown – Pearlridge
546 Kaʻahumanu – Pearlridge
547 Pacific Palisades
548 Pearl City
0 0.25 0.5 1
Miles

Aloha Stadium Station (AS)



Summary

Aloha Stadium Station will be located on Kamehameha Highway at Salt Lake Boulevard. A shared-use park-and-ride lot and transit center will be developed adjacent to the station entrance as part of the Project.

Site Considerations and Access

Station location and nearby land use

- Maps showing station area land use and zoning are included in this report.
- Station area is dominated by a large sports complex (Aloha Stadium) and major highways that surround the site.
- Pearl Harbor Visitors Center is located about 1/2 mile from the station entrance.
- A mix of single-family housing and apartment buildings is mauka of the station.
- Land on the makai side of Kamehameha Highway is owned by the Federal Government.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown in the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- Pedestrians will approach the station from the park-and-ride lot/transit center as well as from Kamehameha Highway and Salt Lake Boulevard.
- During events, pedestrians will be able to access the station from the stadium through the main parking lot. An additional entrance will be used during special events.
- Bicycle parking will be provided near the station entrance with room for more in the future.
- Walk and bike access to the station will need to be supported by the station plaza, sidewalks, and associated wayfinding.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report (see Transit Access Map).
- Transfers to/from buses will take place at a new transit center located next to the station as well as from bus stops on Kamehameha Highway (see Station Area Site Plan).
- TheHandi-Van loading area will be located near the station entrance on Kamehameha Highway (see Station Area Site Plan).

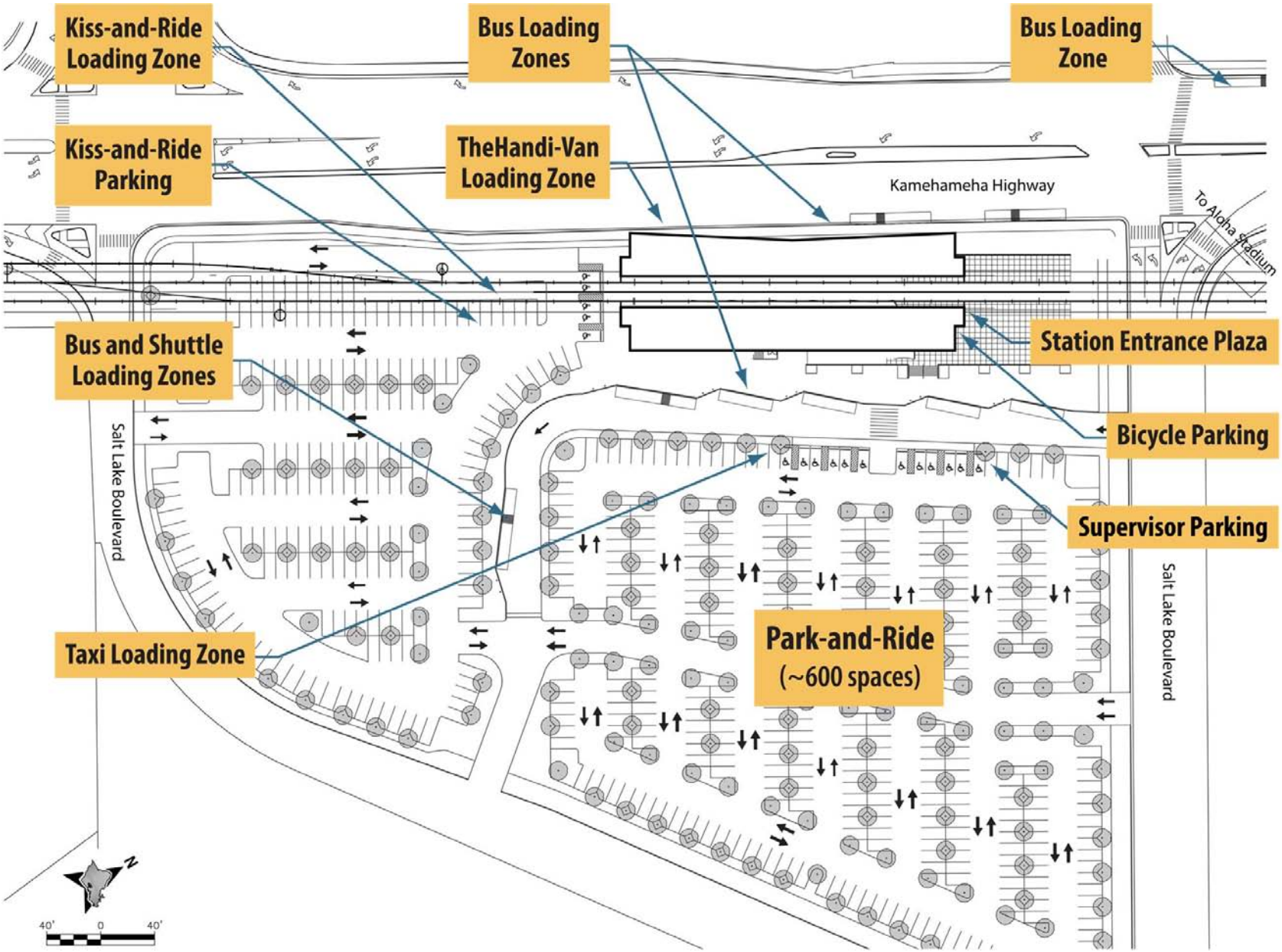
Kiss-and-ride and taxi

- Short-term parking for kiss-and-ride patrons will be provided at the park-and-ride lot.
- One taxi loading zone will be provided at the park-and-ride facility.

Park-and-ride

- A 600-space shared-use park-and-ride facility will be provided mauka of the station. The park-and-ride facility may not be accessible to commuters on days with major events at the stadium.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Aloha Stadium station will have a medium level of use with a high share of bus and park-and-ride trips, as well as high pedestrian volumes associated with major events at the stadium. The station will have **Side Platforms** accessible from a single entrance area directly below the guideway. The station design may include a regular entrance used on weekdays and a special-event entrance for when the stadium is in use.

TheBus and **Park-and-Ride** are the dominant access modes at this station. Design of bus shelters and park-and-ride features should blend in with station design.

Pedestrians/Bicycle users will be coming from surrounding neighborhoods and destinations using Kamehameha Highway and Salt Lake Boulevard. During event days, substantial pedestrian volumes could occur between the station and Aloha Stadium. Bike racks will be needed at the station entrance. Also, space should be preserved for future demand and more racks or lockers should be added as needed.

The **Park-and-Ride** lot will serve regional trips coming from Central O'ahu, Pearl City, Pearl Harbor, and Salt Lake. Access to the lot will be provided along Salt Lake Boulevard.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions [1]		**Other Vehicle Parking**	
45' Bus Loading Zone	3	Park-and-ride	600
60' Bus Loading Zone	2	Kiss-and-ride	10
Layover	0	Kiss-and-ride loading/unloading	1
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	1
Eastbound	1	Tour bus	1
Westbound	1	Private shuttle	1
Northbound	0	Supervisor	1
Southbound	0	Bicycle parking (opening/2030)	20/40

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

[1] At transit center located mauka of the station

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	730
Alightings	220

Access Mode Daily Trips	
Walk/bike	790
Bus	1,410
Park-and-ride	1,610
Kiss-and-ride	110
Other	0
Total	3,920

Station Site Design Issues

Create comfortable station entrance plaza

As the station is expected to serve large crowds attending games and events at the stadium, it will need to have a large pedestrian plaza that provides a safe and comfortable transition to the entrance from the transit center/park-and-ride lot, stadium, and Kamehameha Highway. It must be large enough to adequately handle expected loads during special events at the stadium. The station entrance plaza should provide visible and secure spaces for bicycle parking and efficient, accessible connections to the bus and other loading zones, the park-and-ride lot, and Aloha Stadium.

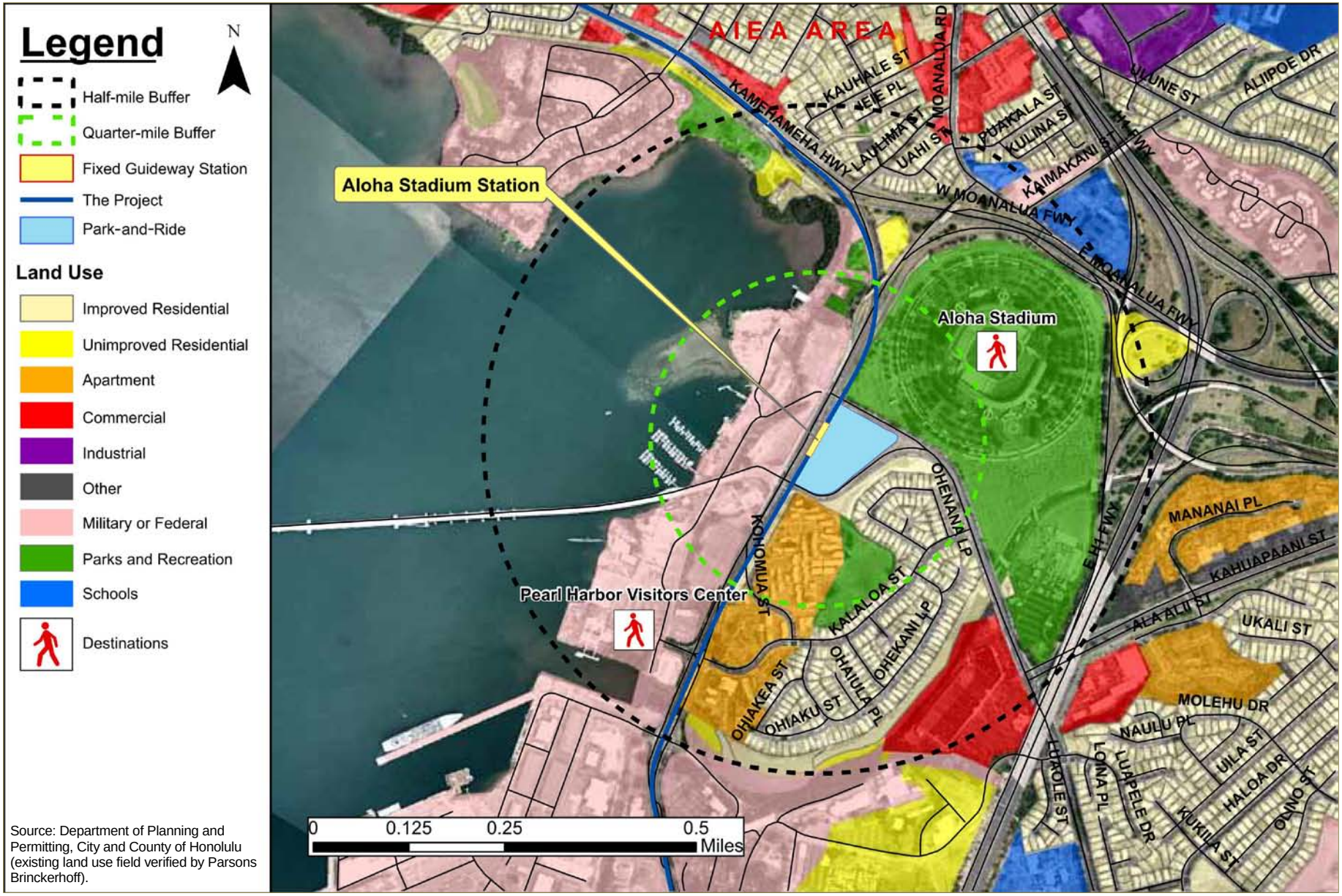
Provide clear connections between station elements

Potentially large pedestrian volumes at the mauka side of the station between the entrance and the park-and-ride and transit center will be addressed through design. Particularly high pedestrian volumes will be expected during stadium events and the station design, including plazas and walkways, will reflect the expected passenger demand created by special events at Aloha Stadium.

Specific Environmental Station Site Design Criteria

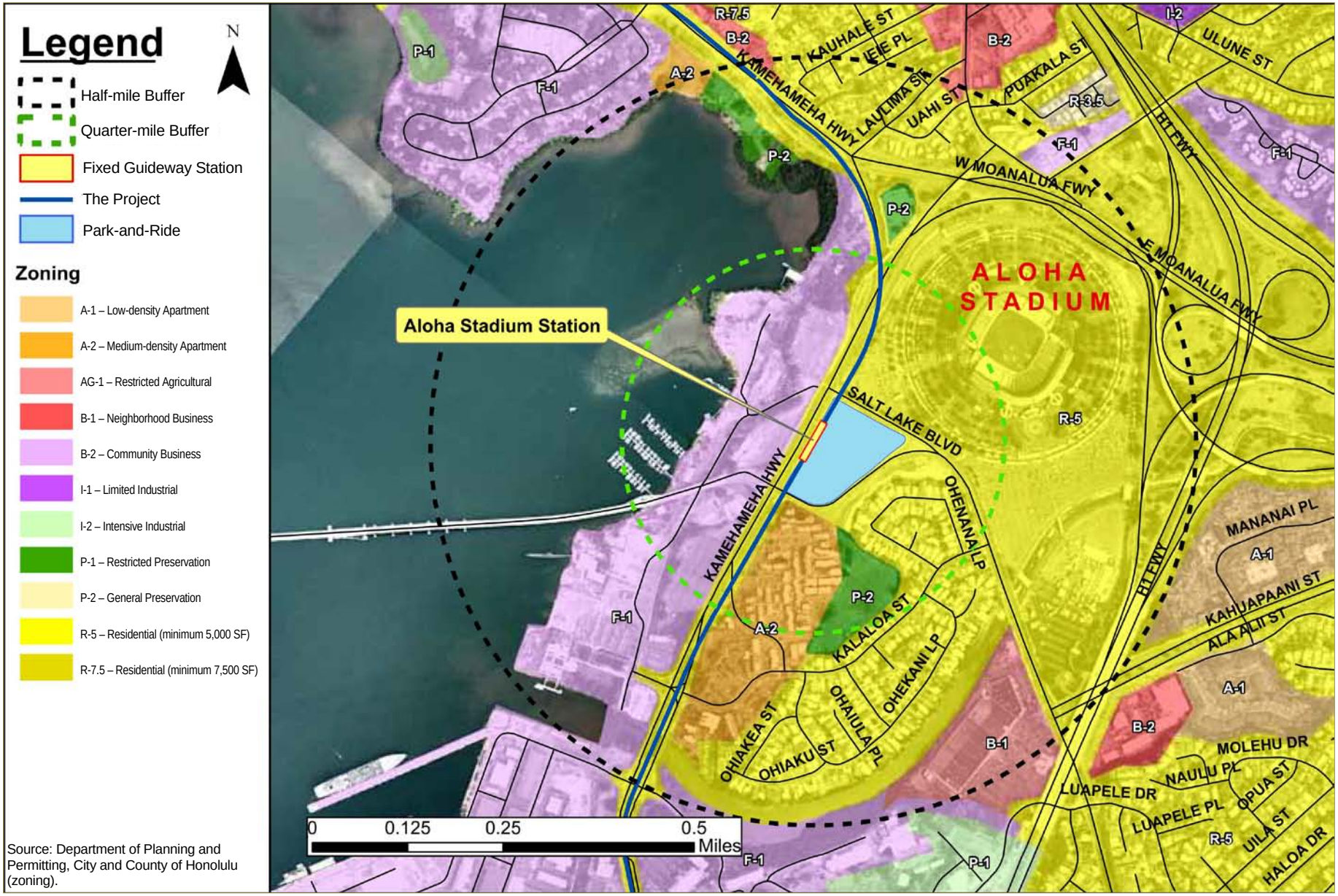
Stipulations in the Section 106 Programmatic Agreement (PA) must be adhered to for construction and construction-related activities at Aloha Stadium Station. Refer to the PA for more information.

Aloha Stadium Station—Existing Land Use



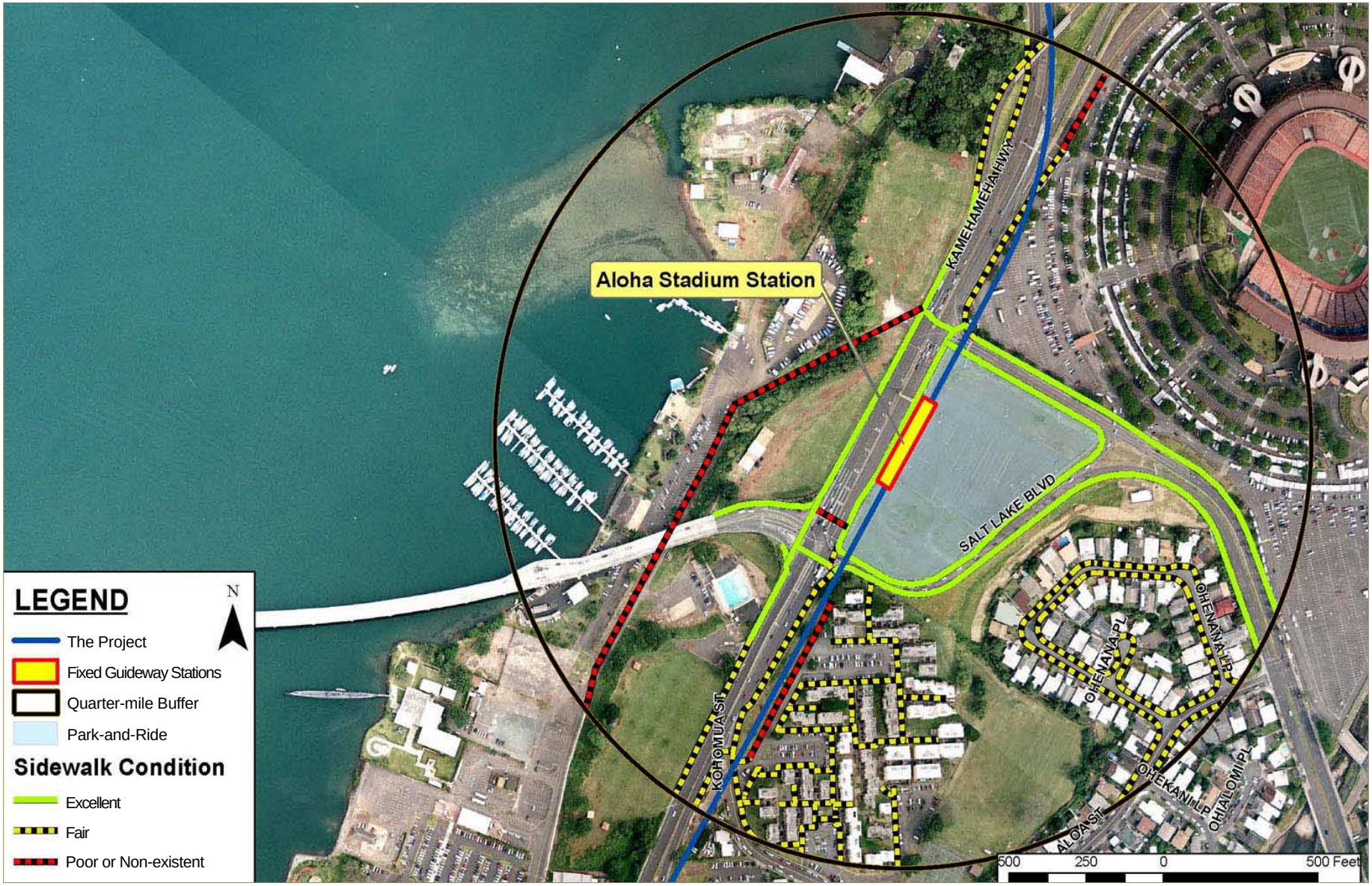
Source: Department of Planning and Permitting, City and County of Honolulu (existing land use field verified by Parsons Brinckerhoff).

Aloha Stadium Station—Existing Zoning

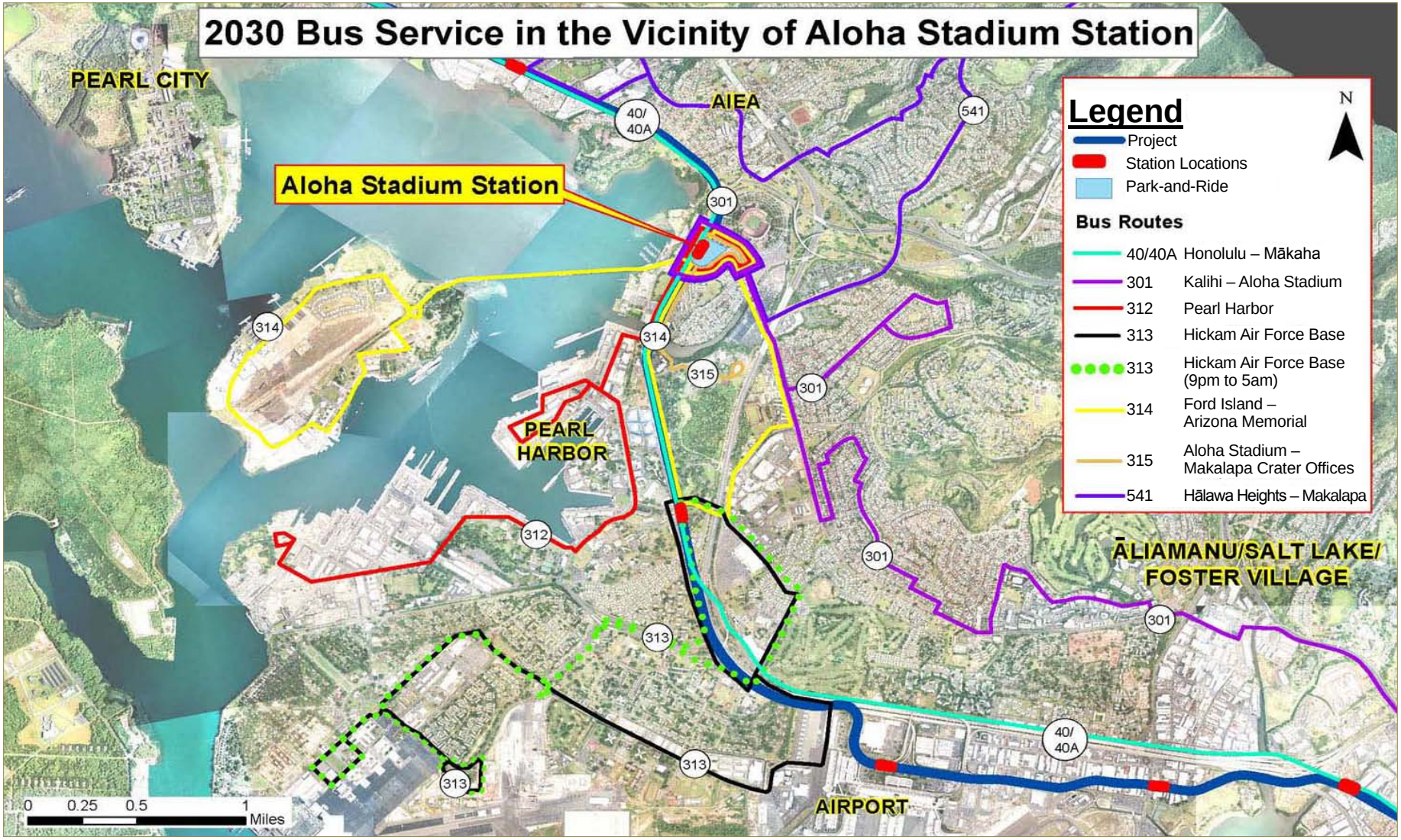


Source: Department of Planning and Permitting, City and County of Honolulu (zoning).

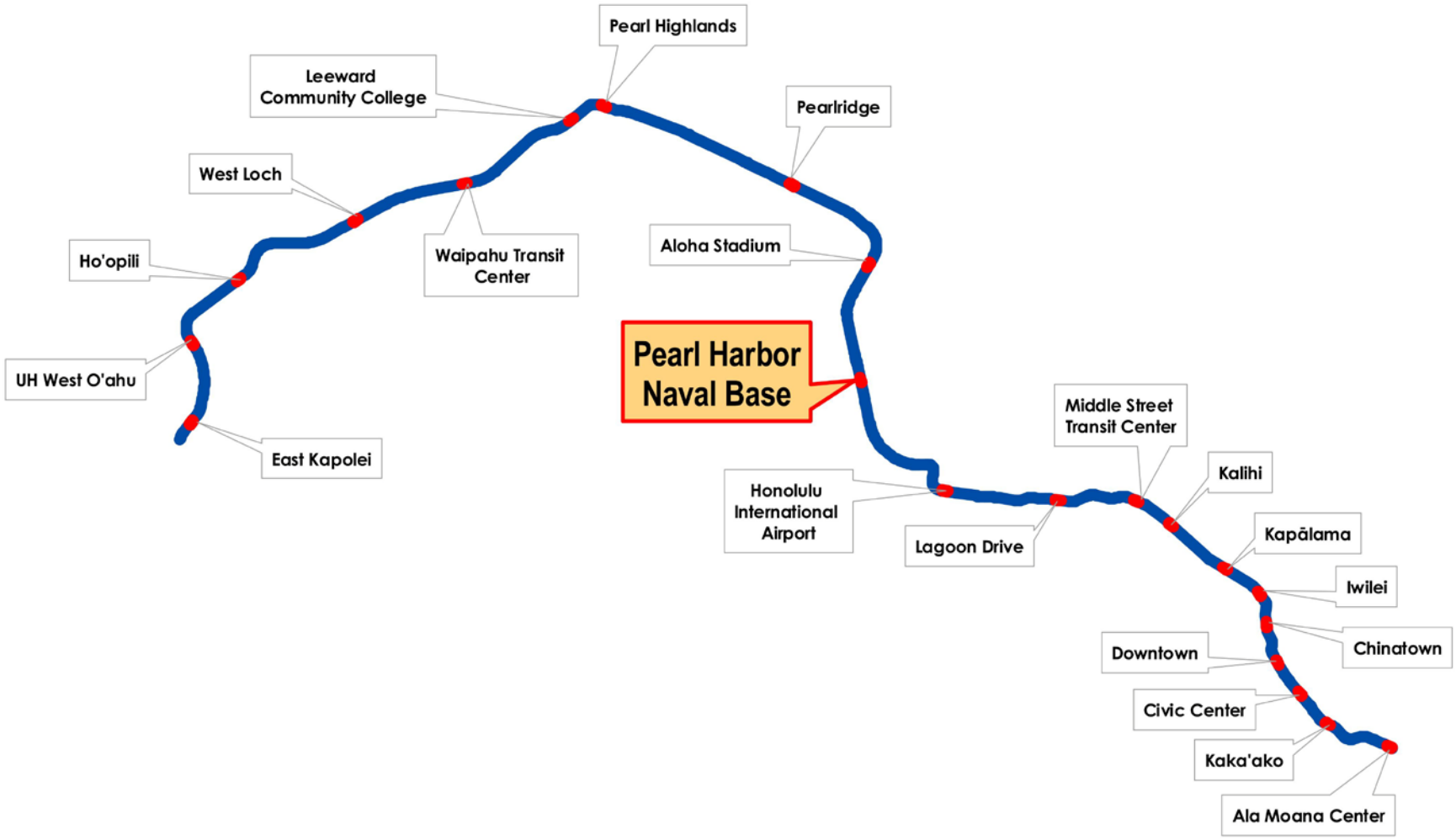
Aloha Stadium Station—Pedestrian Access




Legend
N
Half-mile Buffer
Quarter-mile Buffer
Fixed Guideway Station
The Project
Park-and-Ride
Bicycle Network
Existing Bike Lane
Existing Bike Path
Existing Bike Route
Proposed Bike Lane
Proposed Bike Path
Proposed Bike Route
Source: Department of Planning and Permitting, City and County of Honolulu.
Not to be used for engineering or architectural purposes.
Aloha Stadium Station
ALOHA STADIUM
AIEA AREA
PEARL HARBOR HISTORICAL TRAIL
MOANALUA RD
KAMEHAMEHA HWY
SALT LAKE BLVD
H1
0
0.125
0.25
0.5
Miles


2030 Bus Service in the Vicinity of Aloha Stadium Station
PEARL CITY
AIEA
Aloha Stadium Station
PEARL HARBOR
ĀLIAMANU/SALT LAKE/ FOSTER VILLAGE
AIRPORT
40/ 40A
301
314
315
312
313
541
Legend
N
Project
Station Locations
Park-and-Ride
Bus Routes
40/40A Honolulu – Mākaha
301 Kalihi – Aloha Stadium
312 Pearl Harbor
313 Hickam Air Force Base
313 Hickam Air Force Base (9pm to 5am)
314 Ford Island – Arizona Memorial
315 Aloha Stadium – Makalapa Crater Offices
541 Hālawa Heights – Makalapa
0 0.25 0.5 1 Miles

Pearl Harbor Naval Base Station (PN)



Summary

The Pearl Harbor Naval Base Station will be located on Kamehameha Highway near Radford Drive at the entrance to the Naval Base (Makalapa Gate). The single entrance will be located on the mauka side of the roadway.

Site Considerations and Access

Station location and nearby land use

- Maps showing station area land use and zoning are included in this report. The area is characterized by military-owned land uses.
- Employment sites are on the Naval Base and residential communities on either side of Kamehameha Highway.
- Housing and employment are located within 1/2 mile of the station.
- The H-1 Freeway presents a barrier in accessing destinations mauka of the station.
- Given the extent of military-owned property, land use in the area is not expected to change significantly.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown on the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- Kamehameha Highway is identified as a bike route on the State's Bicycle Master Plan.
- 'Ewa of the station, there is an off-street bicycle path along Kamehameha Highway.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report (see Transit Access Map).
- Transfers to/from buses will take place at on-street bus stops located on Radford Drive and Kamehameha Highway (see Station Area Site Plan).
- TheHandi-Van loading area will be located near the station entrance (see Station Area Site Plan).

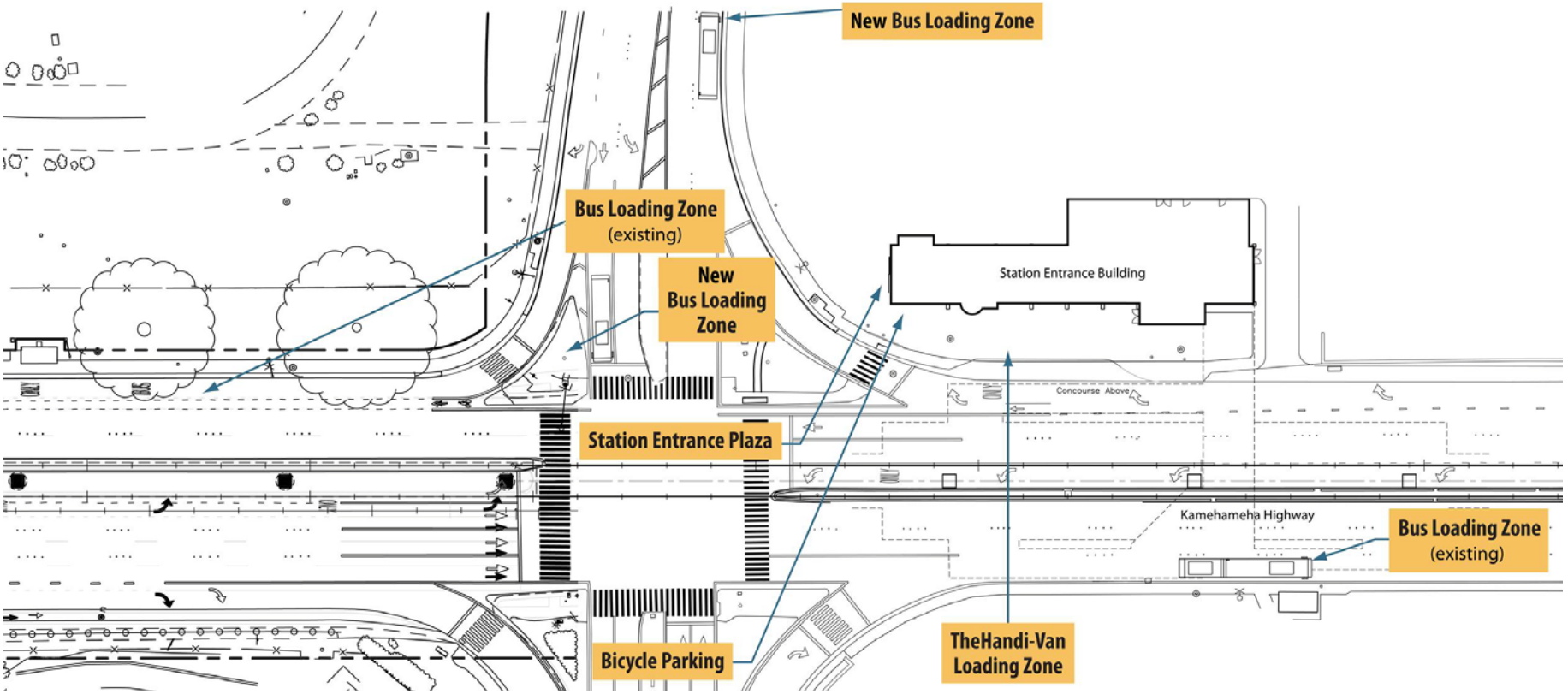
Kiss-and-ride and taxi

- Parking for kiss-and-ride and taxis will not be provided at this station.

Park-and-ride

- A park-and-ride facility will not be provided at this station.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Pearl Harbor Naval Base will be a medium-use station with a high projected volume of walk/bike trips. The station will have a **Side Platform** accessible from a single entrance on the mauka side of Kamehameha Highway and connected by an overhead concourse.

TheBus will be a significant access mode. Existing bus stops on Kamehameha Highway will be maintained and new bus stops will be located on Radford Drive near the station entrance to serve bus routes heading mauka. Design of the bus facilities should blend in with station design. Coordination with HDOT will be required.

A loading zone will be provided for **TheHandi-Van** vehicles near the station entrance.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions		**Other Vehicle Parking**	
45' Bus Loading Zone	0	Park-and-ride	0
60' Bus Loading Zone	0	Kiss-and-ride	0
Layover	0	Kiss-and-ride loading/unloading	0
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	0
Eastbound	2	Tour bus	0
Westbound	2	Private shuttle	0
Northbound	1	Supervisor	1
Southbound	1	Bicycle parking (opening/2030)	20/50

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	300
Alightings	780

Access Mode Daily Trips	
Walk/bike	2,750
Bus	2,530
Park-and-ride	0
Kiss-and-ride	130
Other	30
Total	5,440

Pedestrians will access the single station entrance on the southeast corner of Radford Drive and Kamehameha Highway. Most pedestrians will be employees coming/going to the Pearl Harbor Naval Base. Signals and crosswalks may need to be upgraded to accommodate the expected demand during peak periods.

Bicycle parking for 20 bicycles will be provided at the station entrance with space provided for an additional 30 spaces to accommodate future demand. The station entrance plaza and adjacent sidewalks should be designed to ensure adequate capacity and passenger comfort.

Station Site Design Issues and Challenges

Create comfortable station entrance plazas

Almost all the demand at the Pearl Harbor Naval Base Station will involve access by buses, walking, or biking. With walking/biking as the dominant access mode to the station, it will be important for the station, with a single entrance, to have a large pedestrian plaza that provide a safe and comfortable transition between on-street bus stops, nearby employment areas (the Navy Base), and the station entrance.

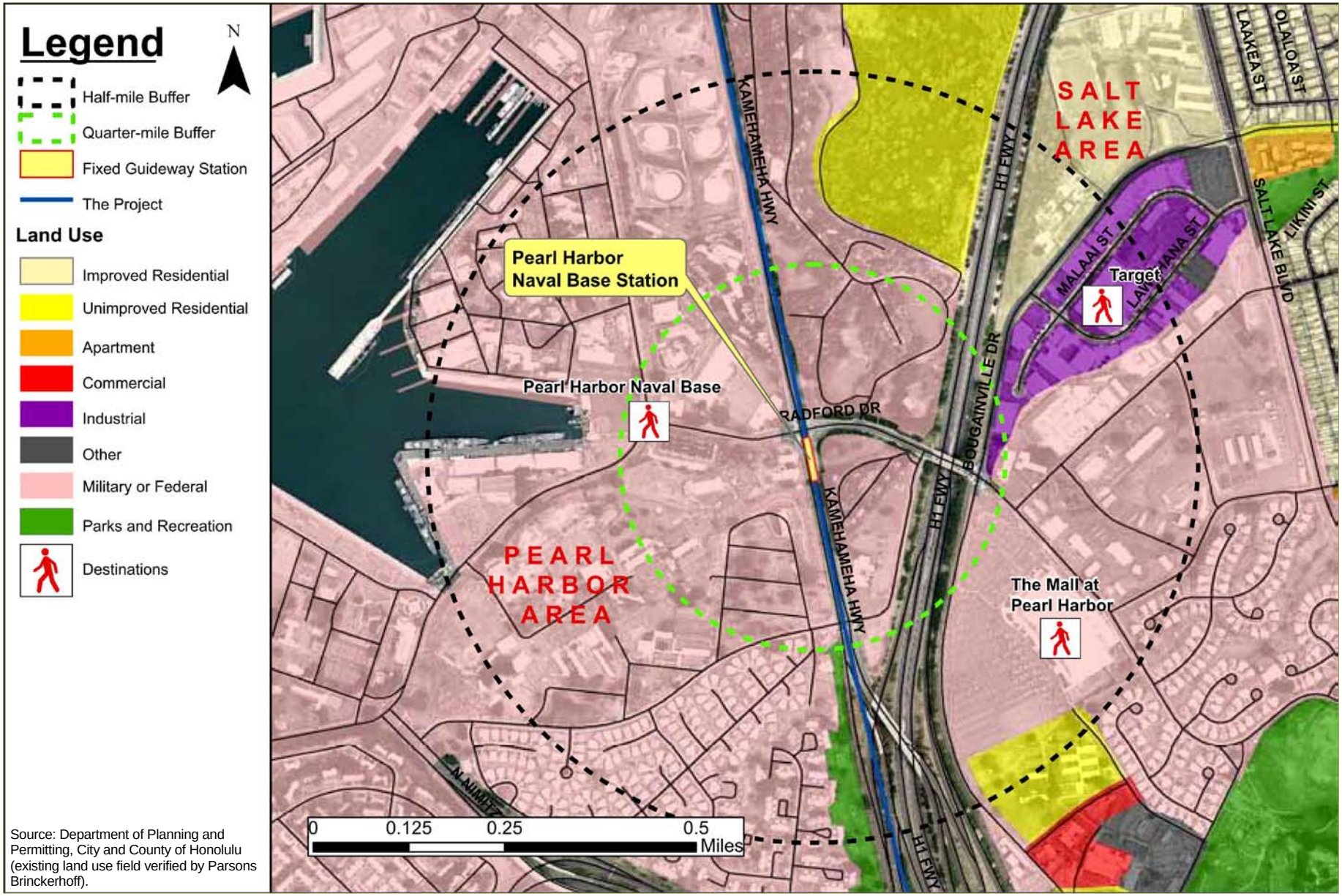
Provide clear connections between station elements

Safe and convenient pedestrian connections between the station entrance and nearby elements will be needed. As much as possible, there should be a clear line of sight between the station entrance, sidewalks, and on-street bus stops.

Specific Environmental Station Site Design Criteria

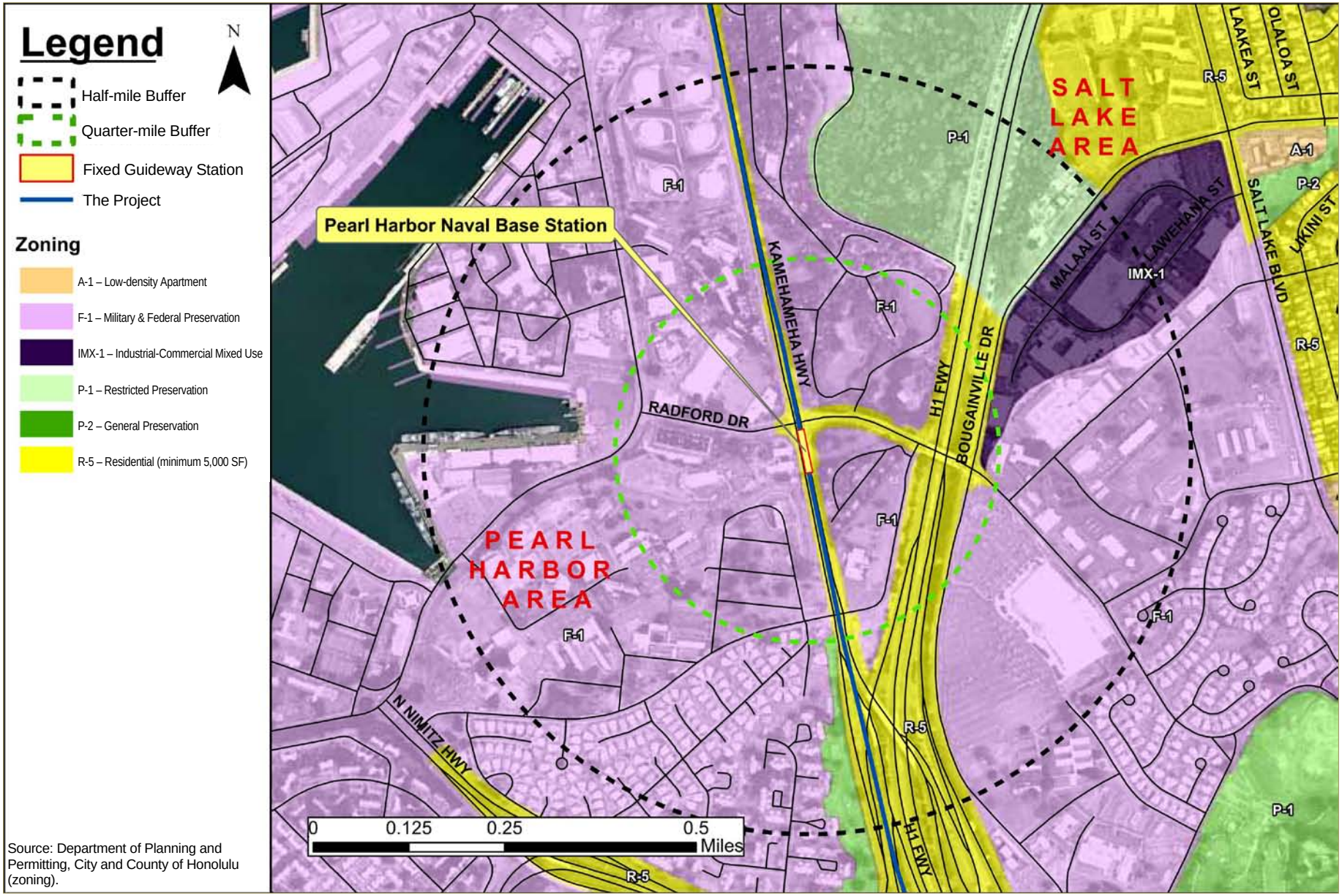
Stipulations in the Section 106 Programmatic Agreement (PA) must be adhered to for construction and construction-related activities at Pearl Harbor Naval Base Station. Refer to the PA for more information.

Pearl Harbor Naval Base Station—Existing Land Use



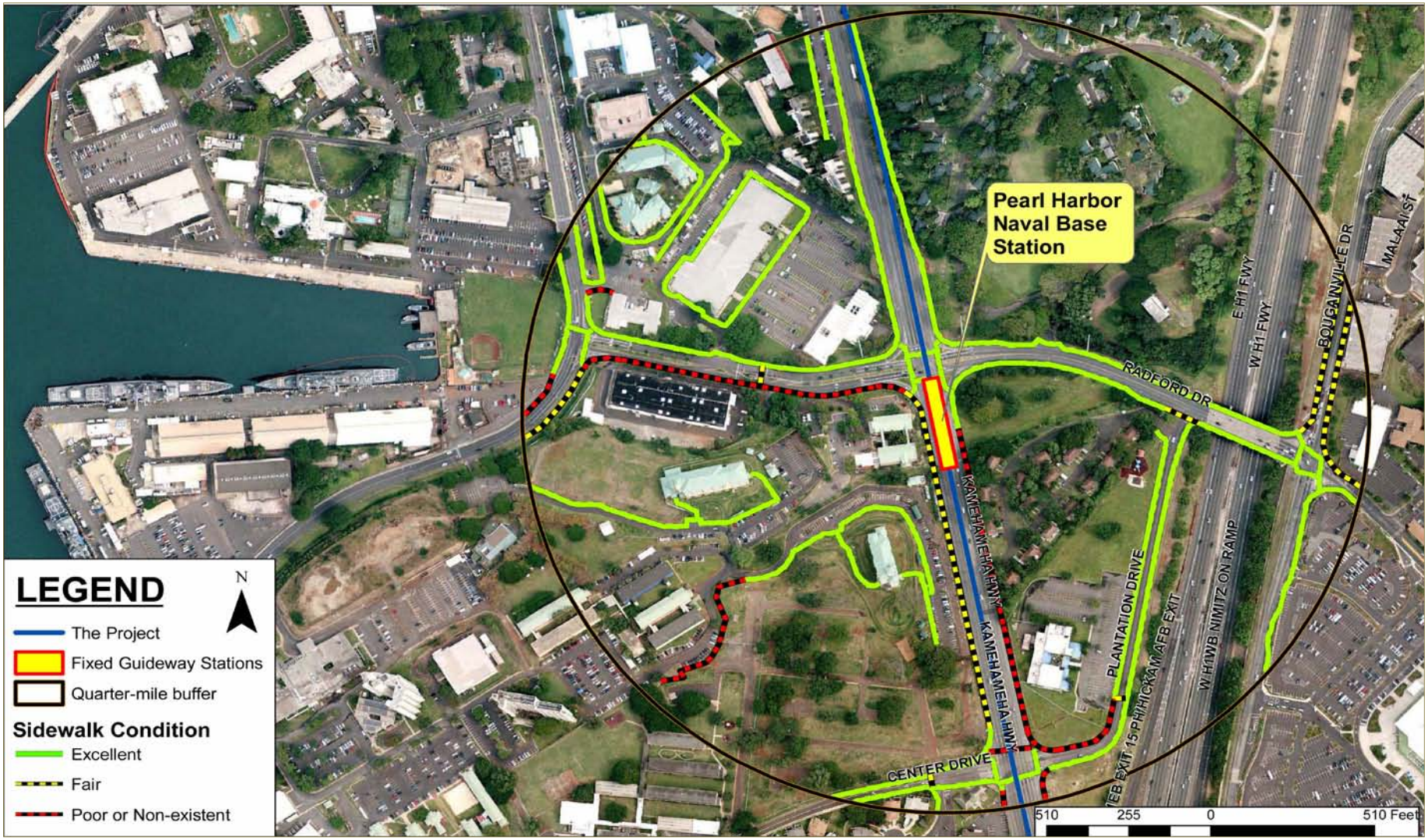
Source: Department of Planning and Permitting, City and County of Honolulu (existing land use field verified by Parsons Brinckerhoff).

Pearl Harbor Naval Base Station—Existing Zoning

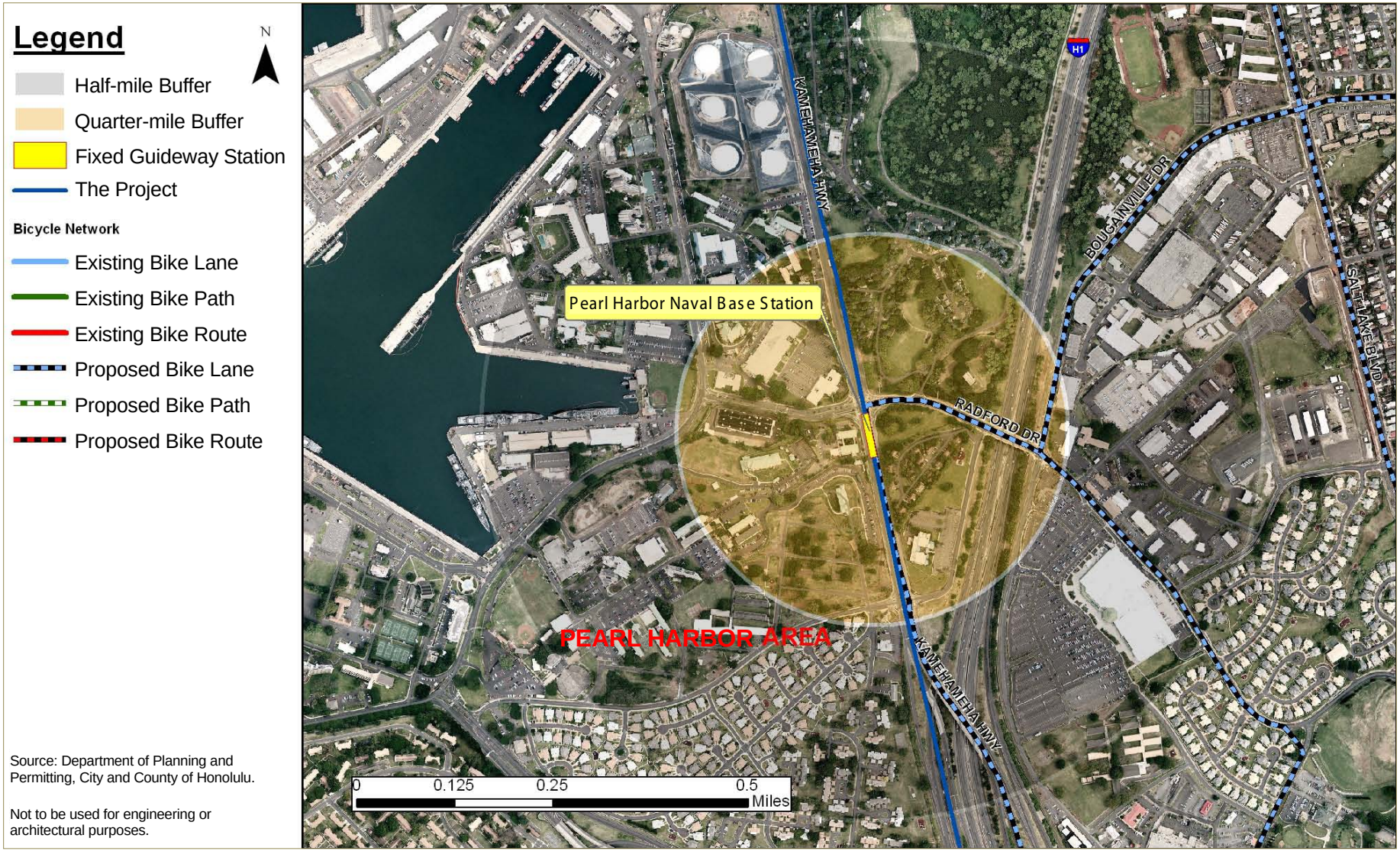


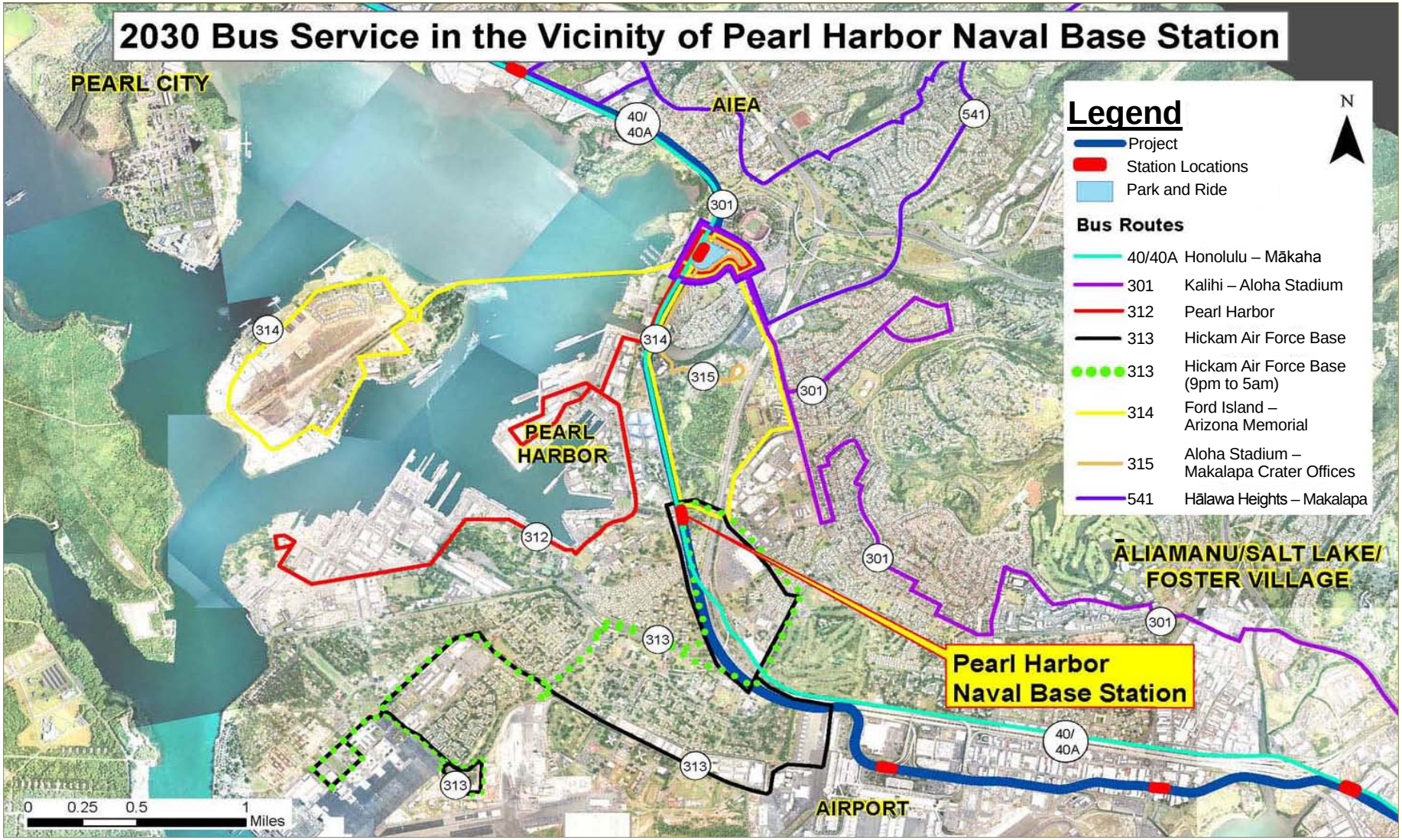
Source: Department of Planning and Permitting, City and County of Honolulu (zoning).

Pearl Harbor Naval Base Station—Pedestrian Access

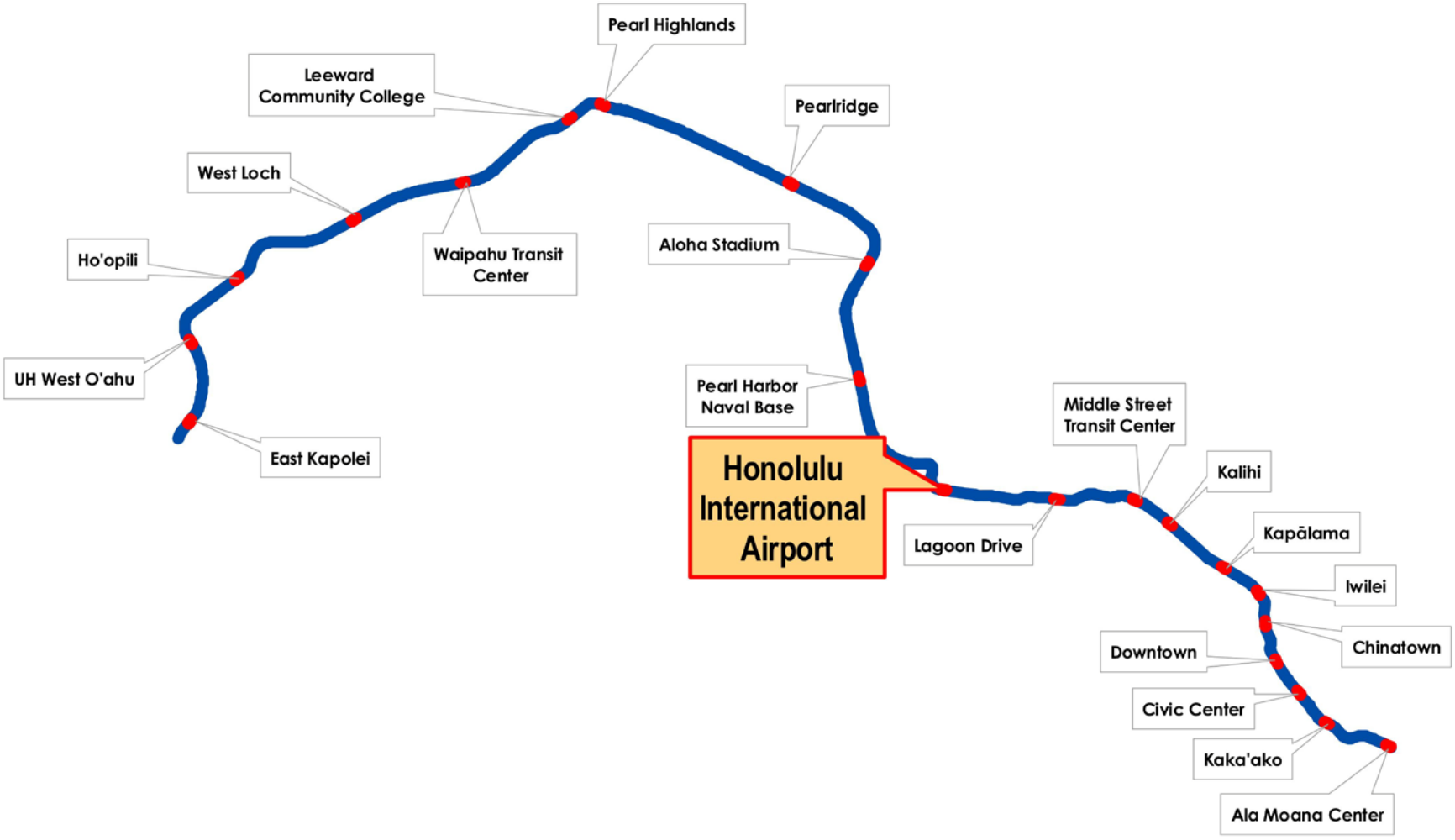


Pearl Harbor Naval Base Station—Bicycle Access




2030 Bus Service in the Vicinity of Pearl Harbor Naval Base Station
PEARL CITY
AIEA
PEARL HARBOR
ĀLIAMANU/SALT LAKE/ FOSTER VILLAGE
AIRPORT
Pearl Harbor Naval Base Station
Legend
Project
Station Locations
Park and Ride
Bus Routes
40/40A Honolulu – Mākaha
301 Kalihi – Aloha Stadium
312 Pearl Harbor
313 Hickam Air Force Base
313 Hickam Air Force Base (9pm to 5am)
314 Ford Island – Arizona Memorial
315 Aloha Stadium – Makalapa Crater Offices
541 Hālawa Heights – Makalapa
N
0 0.25 0.5 1 Miles

Honolulu International Airport Station (HI)



Summary

The Honolulu International Airport Station will be located on Ala Onaona Road between the lei stands and parking garage exit booths. Improved pedestrian walkways will connect the station to the Overseas and Interisland Terminals. A single entrance will provide access to the two side platforms.

Site Considerations and Access

Station location and nearby land uses

- Maps showing station area land use and zoning are included in this report.
- The station area is dominated by Honolulu International Airport and related uses, including car rental facilities and small retail (lei stands).
- A major U.S. Postal facility is nearby, along with other light industrial employment centers.
- Land uses in the station area are not expected to change substantially in the future.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown on the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- Two paths will connect the station entrance to the Interisland and Overseas terminals.
- Existing surface pedestrian connections to the airport terminals will be updated and enhanced to provide well-defined and ADA-accessible routes.
- Walk and bike access to the station will be supported by station plazas, improved sidewalks, and associated wayfinding.
- Bicycle parking will be provided near the station entrance.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report (see Transit Access Map).
- Transfers to/from buses will take place at a new bus stop to be located directly in front of the station entrance (see Station Area Site Plan).
- TheHandi-Van loading area will be located near the station entrance (see Station Area Site Plan).

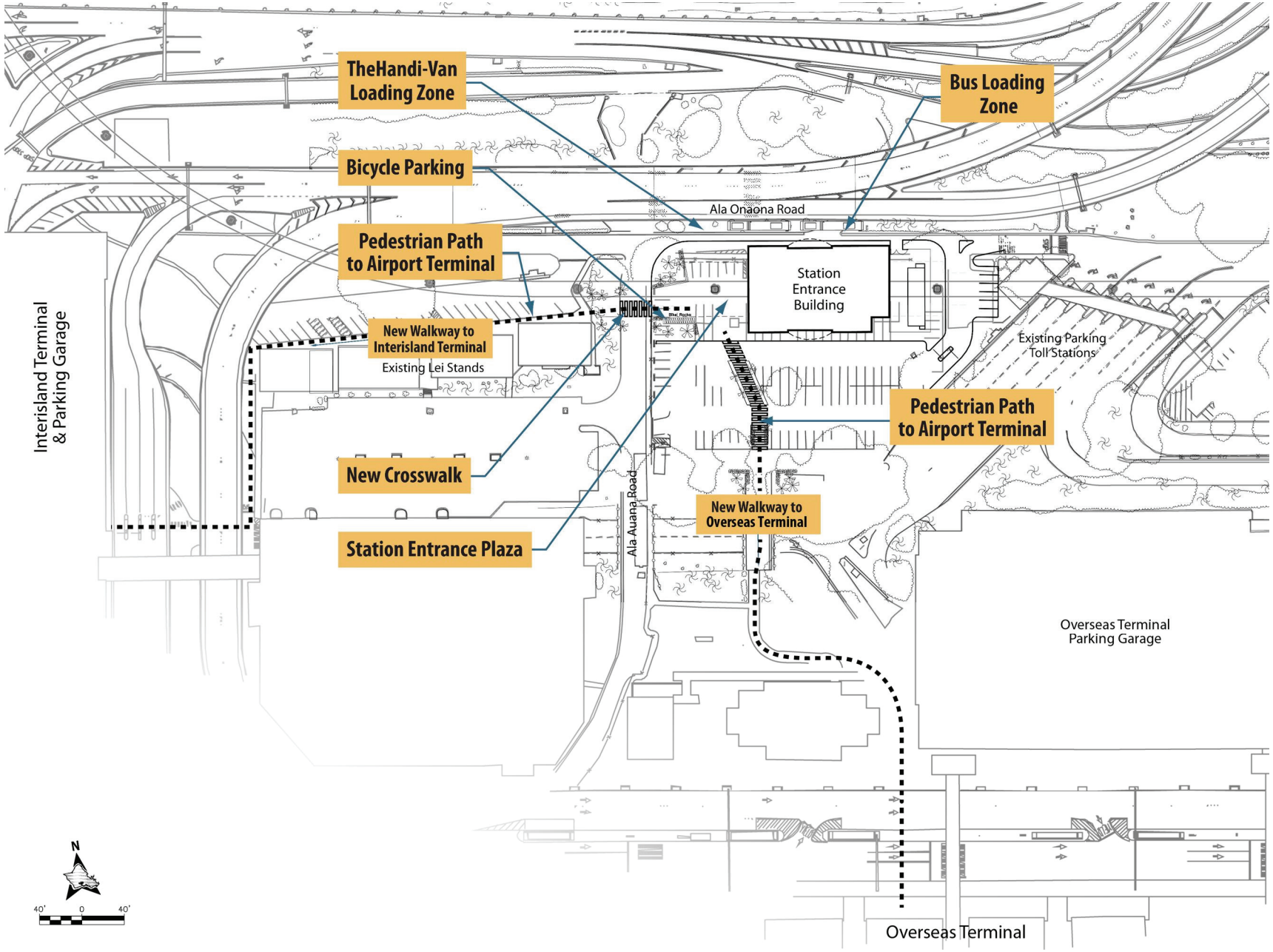
Kiss-and-ride and taxi

- Kiss-and-ride and taxi zones will not be provided at this station.

Park-and-ride

- A park-and-ride facility will not be provided at this station.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the Honolulu International Airport Station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Honolulu International Airport will be a high-use station with a design intended to accommodate high projected volumes of foot traffic (including airline passengers and crew with luggage) and facilitate easy access to/from the adjacent airport terminals. The station will have **Side Platforms** accessible from a single entrance on Ala Onaona Road. The platforms will be reached from the ground level entrance building via high-speed elevators.

TheBus access will be accommodated by transfers from a new on-street bus stop located on Ala Onaona Road. A bus pullout is not anticipated.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions		**Other Vehicle Parking**	
45' Bus Loading Zone	0	Park-and-ride	0
60' Bus Loading Zone	0	Kiss-and-ride	0
Layover	0	Kiss-and-ride loading/unloading	0
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	0
Eastbound	1	Tour bus	0
Westbound	0	Private shuttle	0
Northbound	0	Supervisor	0
Southbound	0	Bicycle parking (opening/2030)	20/60

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	210
Alightings	730

Access Mode Daily Trips	
Walk/bike	3,360
Bus	2,910
Park-and-ride	0
Kiss-and-ride	40
Other	10
Total	6,320

To accommodate **Pedestrian** access, existing ground-level pedestrian routes will be improved and made compliant with ADA regulations. New signage and wayfinding will connect the rail station to the airport terminals. Separate walkways will lead to the Interisland and Overseas Terminals. General sidewalk improvements near the station should be implemented in coordination with appropriate agencies to facilitate connections to employment centers, such as the Post Office facility.

Twenty **Bicycle** racks will be provided at the station entrance. Also, space should be preserved for future demand and more racks or lockers should be added as needed.

Station Site Design Issues and Challenges

Access and wayfinding for Airport passengers and employees

A large percentage of the station users will be airline passengers. Many of them will be new or infrequent users of the station and the rail system in general. The two new access routes from the rail station to the Overseas and Interisland airport terminals will be designed with this in mind. Lighting, signage, pavement patterns, and other wayfinding techniques will be incorporated into the routes to create a safe and pleasant experience for the user. Signage within the airport terminals directing people to the rail station will be coordinated with the Airport. Other rail station patrons will include airport workers and employees at the Post Office and other nearby work sites.

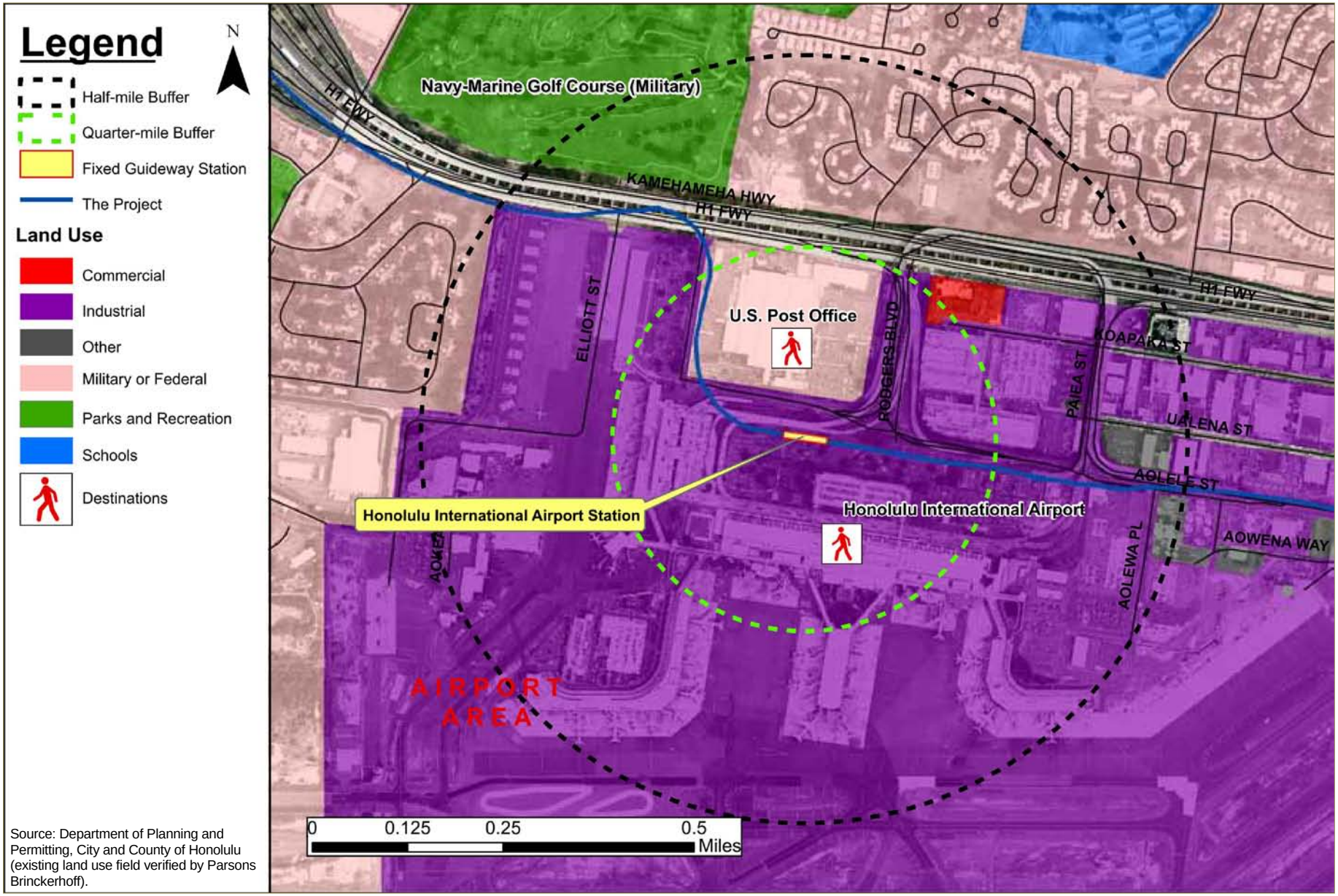
Create comfortable station entrance plaza

Over 50 percent of station demand will involve passengers accessing the station by walking or bicycling while just under 50 percent of patrons will access the station by bus transfers. It will be important for the station to have a large pedestrian plaza that is inviting to the potentially large number of riders (many of whom will be using the system for the first time) who have just arrived by plane, and provides a safe and comfortable transition between the bus stop, pedestrian paths, sidewalks, and the station entrance.

Provide clear connections between station elements

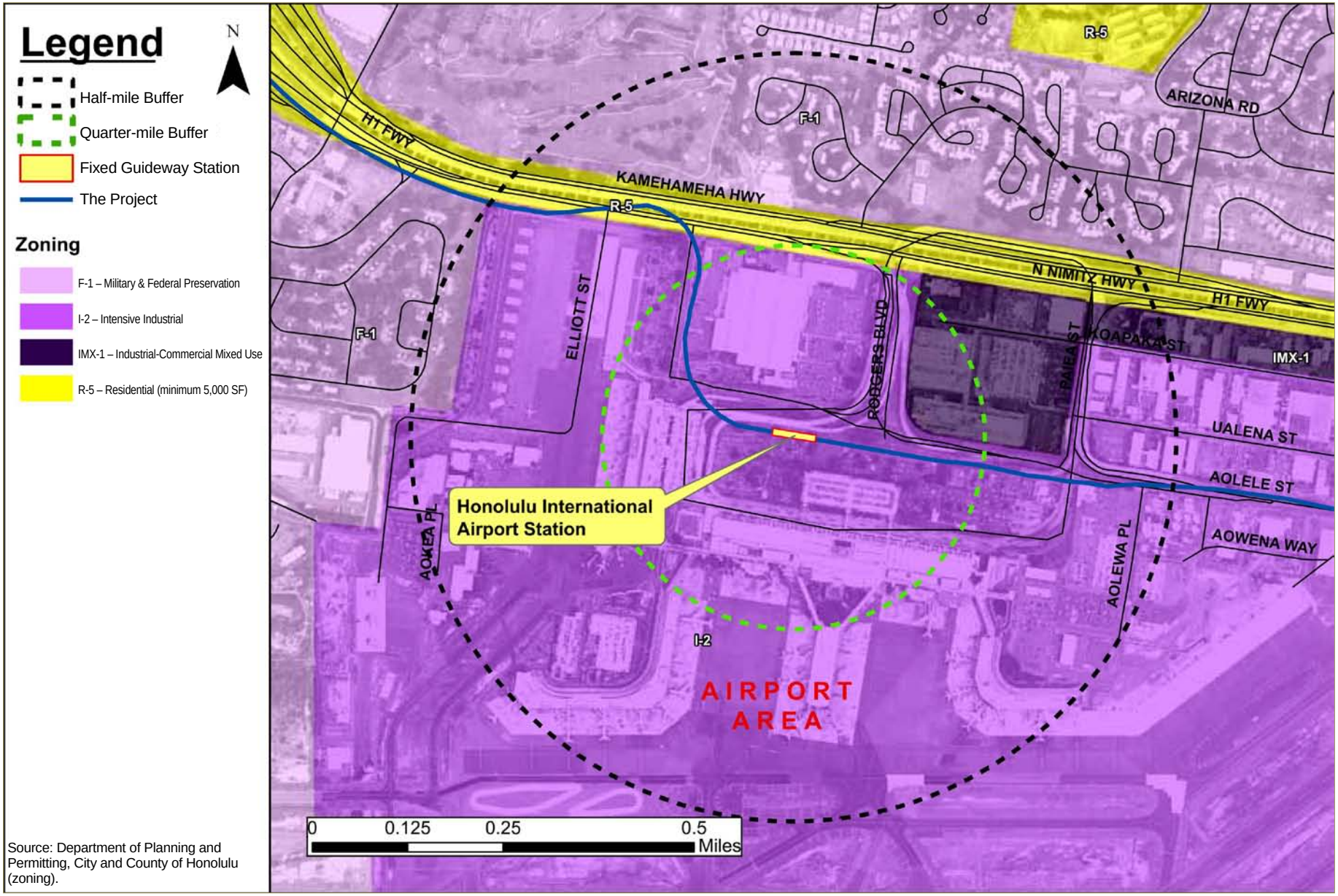
Safe and convenient pedestrian connections between various station elements will be needed, with clear lines of sight between the station entrance and other elements, such as the on-street bus stops, bicycle parking, and walking paths to airport terminals. At various times of day, there could be large volumes of patrons accessing the station entrance, which should be reflected in the station plaza design.

Honolulu International Airport Station—Existing Land Use

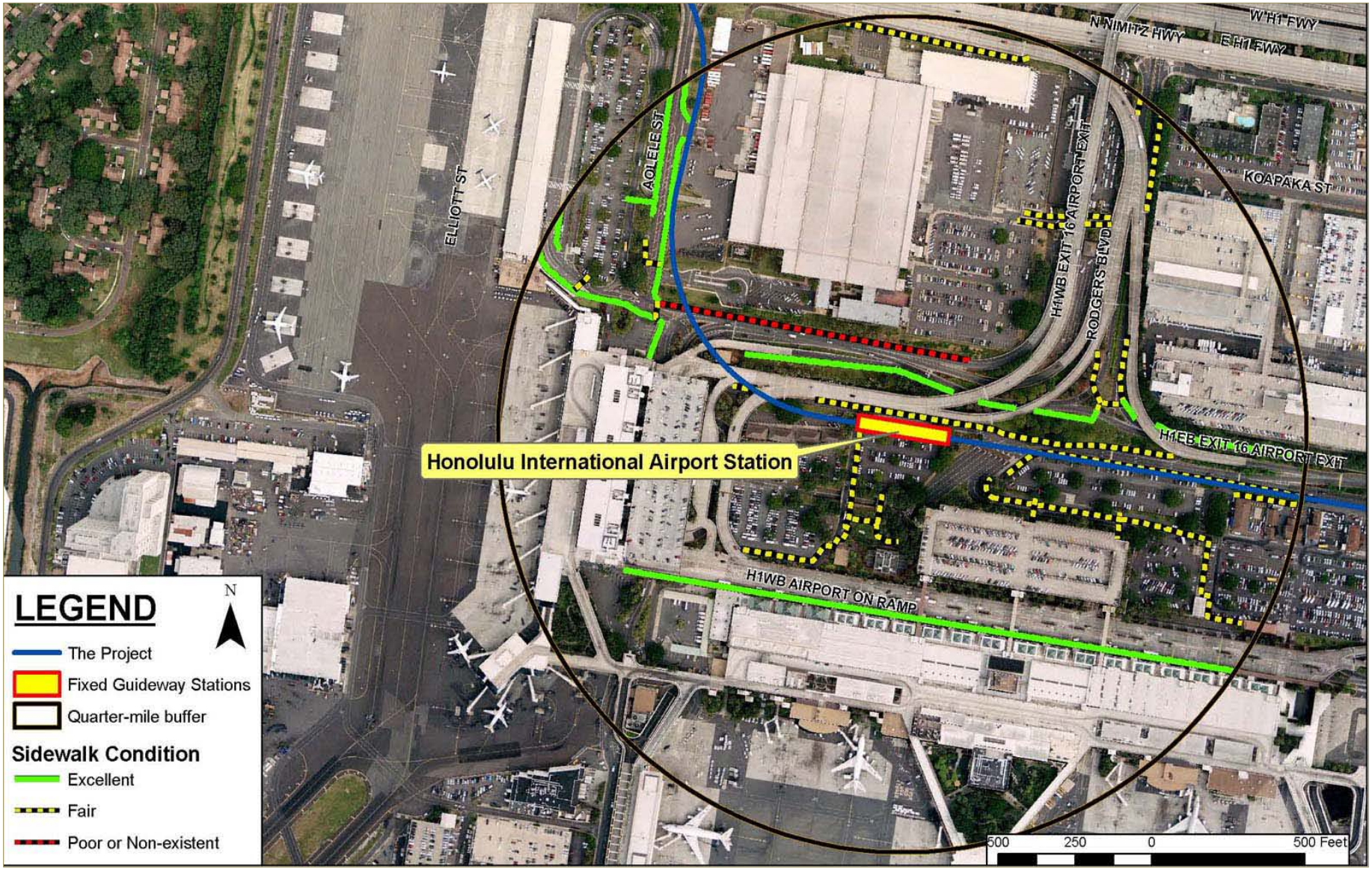


Source: Department of Planning and Permitting, City and County of Honolulu (existing land use field verified by Parsons Brinckerhoff).

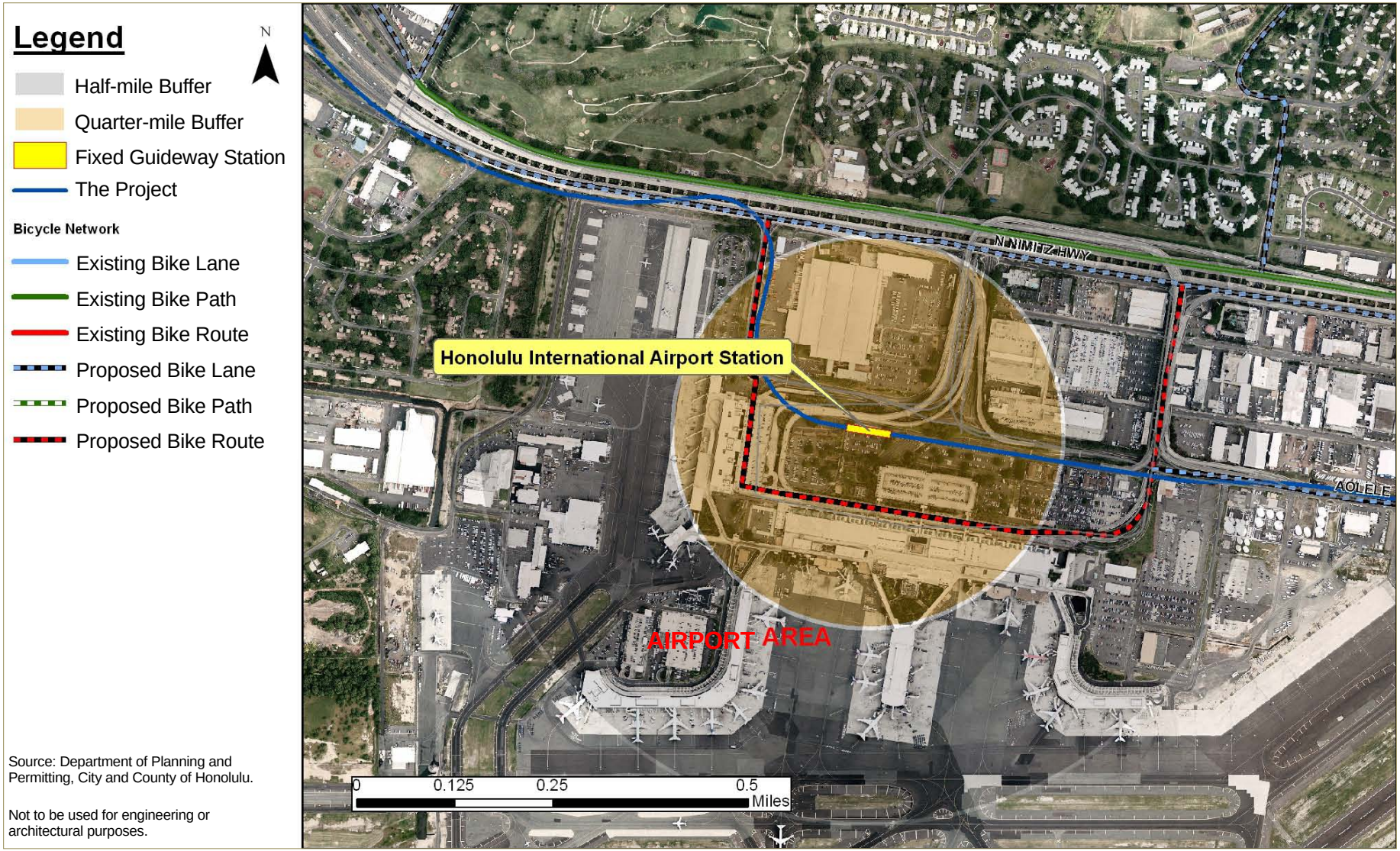
Honolulu International Airport Station—Existing Zoning

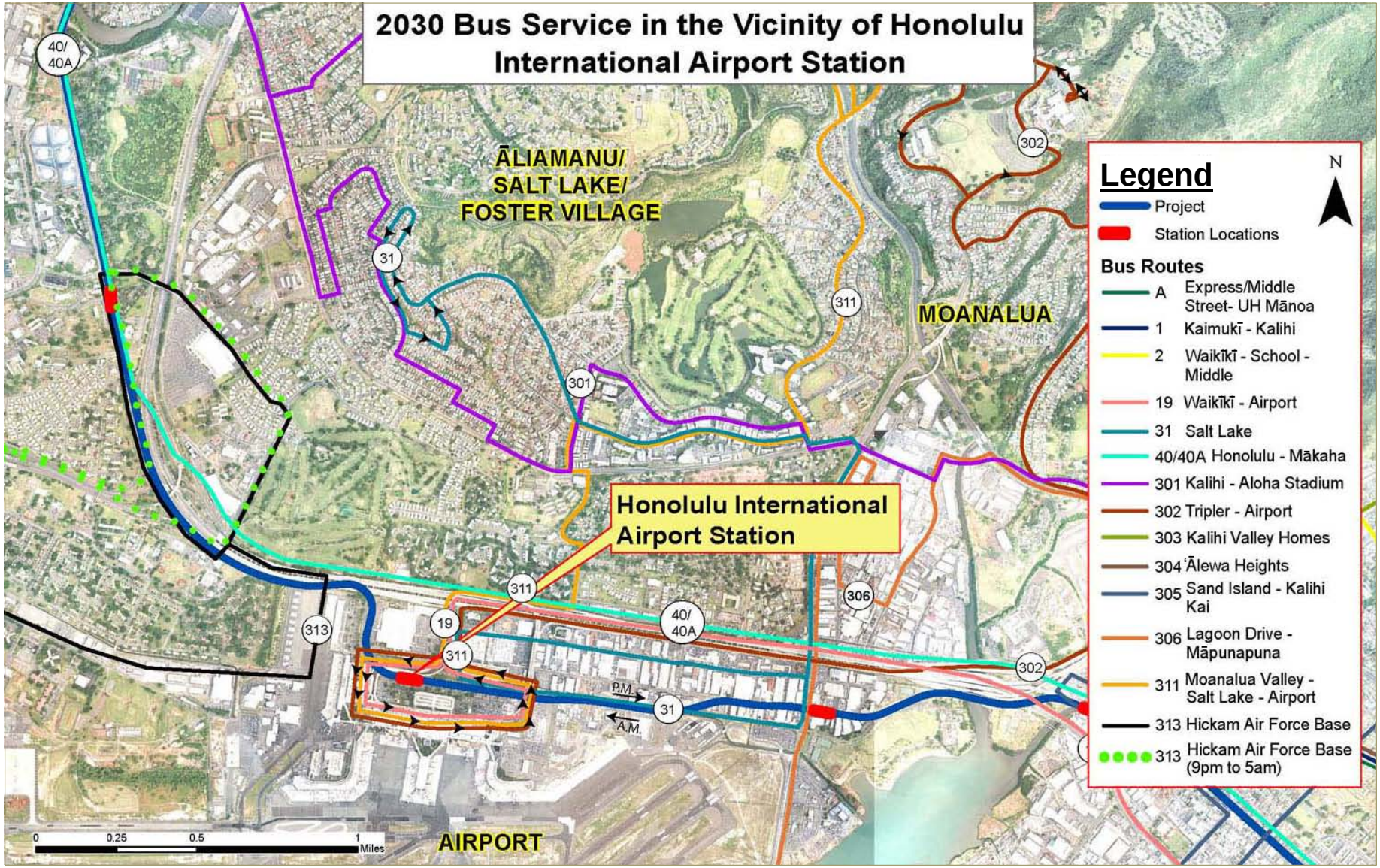


Honolulu International Airport Station—Pedestrian Access

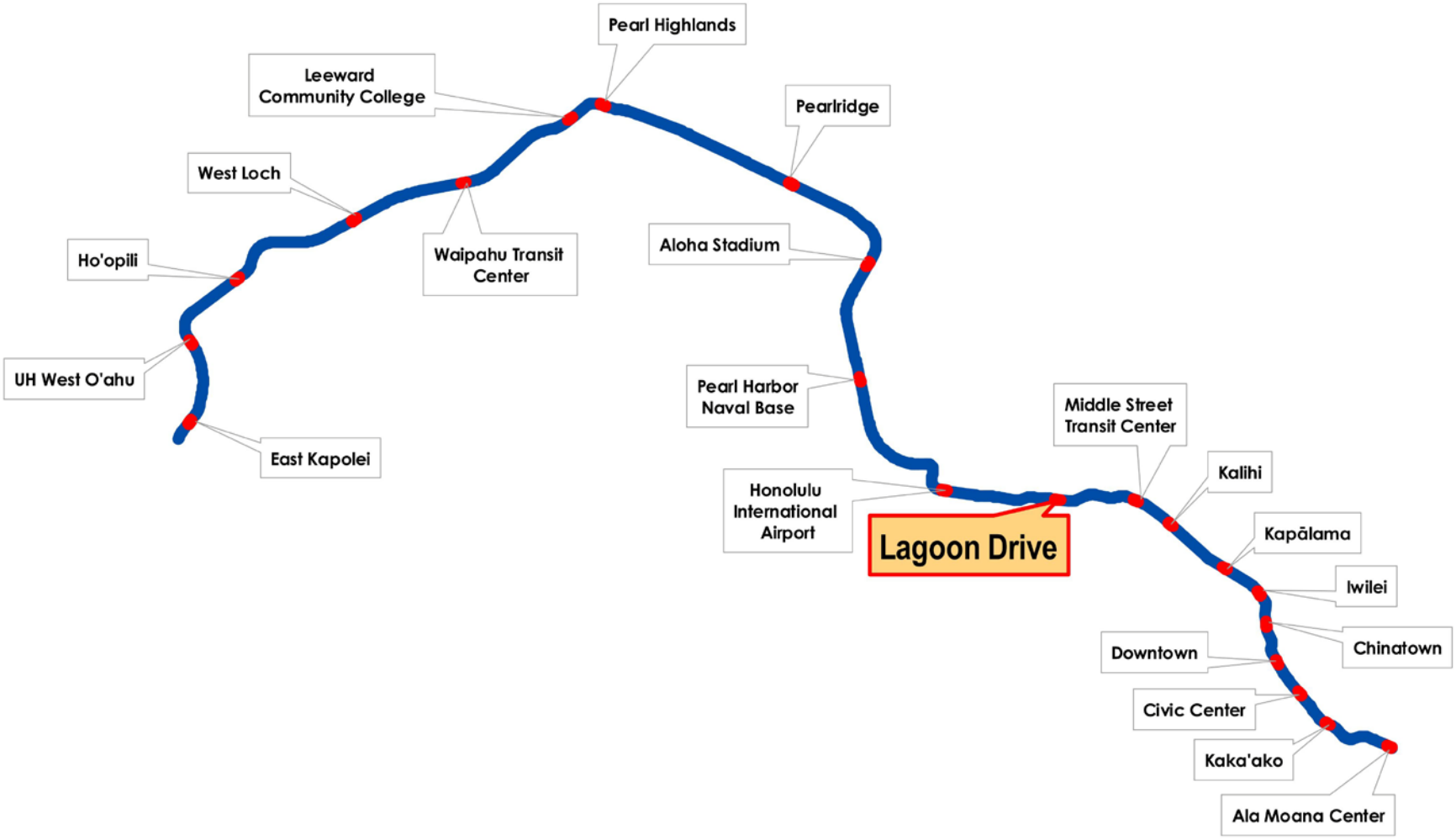


Honolulu International Airport Station—Bicycle Access




2030 Bus Service in the Vicinity of Honolulu International Airport Station
ĀLIAMANU/
SALT LAKE/
FOSTER VILLAGE
MOANALUA
AIRPORT
Honolulu International Airport Station
40/ 40A
31
301
311
302
313
19
306
P.M.
A.M.
0 0.25 0.5 1 Miles
N
Legend
Project
Station Locations
Bus Routes
A Express/Middle Street- UH Mānoa
1 Kaimukī - Kalihi
2 Waikīkī - School - Middle
19 Waikīkī - Airport
31 Salt Lake
40/40A Honolulu - Mākaha
301 Kalihi - Aloha Stadium
302 Tripler - Airport
303 Kalihi Valley Homes
304 ʻĀlewa Heights
305 Sand Island - Kalihi Kai
306 Lagoon Drive - Māpunapuna
311 Moanalua Valley - Salt Lake - Airport
313 Hickam Air Force Base
313 Hickam Air Force Base (9pm to 5am)

Lagoon Drive Station (LD)



Summary

The Lagoon Drive Station will be on Ualena Street/Waiwai Loop at Lagoon Drive, with entrances on either side of Waiwai Loop. The station design includes two new on-street bus stops and new crosswalks across Lagoon Drive to connect the bus stops to the rail station.

Site Considerations and Access

Station location and nearby land uses

- Maps showing station area land use and zoning are included in this report. The area contains mostly light industrial and supporting commercial land uses.
- Much of the nearby property is state owned and land use is not expected to change substantially in the future.
- The station is located in an area dominated by Honolulu International Airport and related uses.
- Keʻehi Lagoon Beach Park is located nearby.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown on the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- Busy streets with heavy commercial truck traffic and a lack of crosswalks make the station area difficult for bicyclists and pedestrians.
- Most businesses in the general area are located mauka, and the nearest bike path is on Nimitz Highway, about two blocks from the station.
- Most pedestrian and bicyclists will reach the station via Lagoon Drive.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report (see Transit Access Map).
- Most of the station demand will be via bus transfers.
- Transfers to/from buses will take place at two new bus stops located on Lagoon Drive near the mauka station entrance (see Station Area Site Plan).
- A new crosswalk across Lagoon Drive will connect the station to a new makai-bound bus stop (see Station Area Site Plan).
- TheHandi-Van loading area will be located near the station entrance on Lagoon Drive (see Station Area Site Plan).

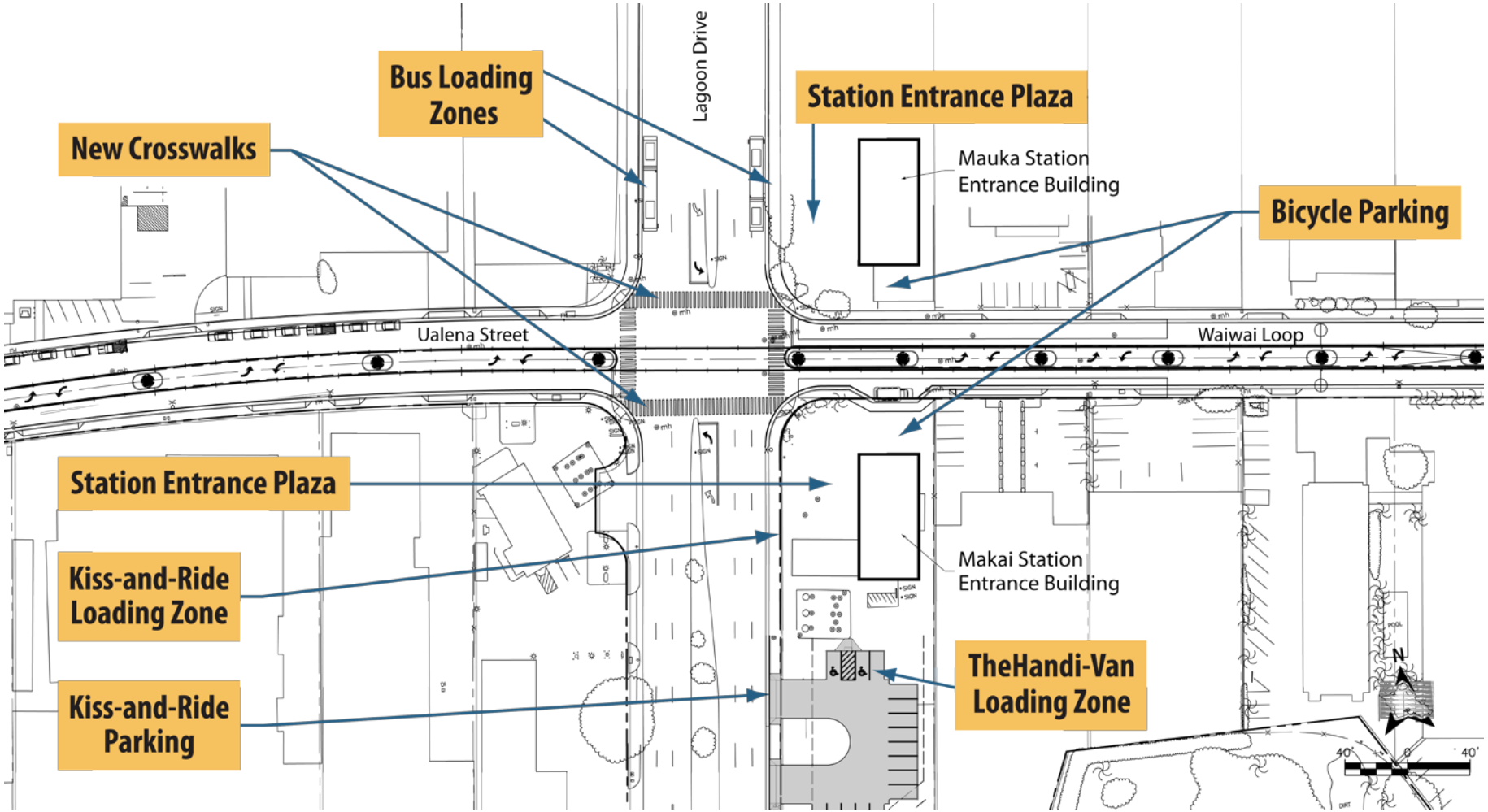
Kiss-and-ride and taxi

- Kiss-and-ride short-term parking and a loading zone will be provided on Lagoon Drive.
- A taxi zone will not be provided.

Park-and-ride

- A park-and-ride facility will not be provided at this station.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Lagoon Drive will be a medium-use station with a high projected share of bus transfers and more modest volume of walk/bike trips. The station will have **Side Platforms** accessible from entrances on either side of Waiwai Loop. Since each entrance will serve only one travel direction, there will be more pedestrian traffic crossing the street to make bus connections and other trips. This will make the design of street elements more important.

To accommodate **Pedestrian** access, two new crosswalks across Lagoon Drive will be provided to allow connections to the station entrances for those patrons coming from the 'Ewa side of Lagoon Drive.

About two-thirds of daily station demand will involve transfers from **TheBus.** Bus access will be accommodated by transfers from on-street bus stops located on Lagoon Drive.

To accommodate **Bicycles,** parking for a minimum of 20 bicycles (bike racks) will be provided at the station entrance. These racks will be divided among the two entrances, and space will be preserved for future demand. More racks or lockers should be added as needed.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions		**Other Vehicle Parking**	
45' Bus Loading Zone	0	Park-and-ride	0
60' Bus Loading Zone	0	Kiss-and-ride	3
Layover	0	Kiss-and-ride loading/unloading	1
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	0
Eastbound	0	Tour bus	0
Westbound	0	Private shuttle	0
Northbound	1	Supervisor	0
Southbound	1	Bicycle parking (opening/2030)	20/30

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	260
Alightings	330

Access Mode Daily Trips	
Walk/bike	700
Bus	2,230
Park-and-ride	0
Kiss-and-ride	100
Other	20
Total	3,050

Station Site Design Issues and Follow-up

Create comfortable station entrance plazas

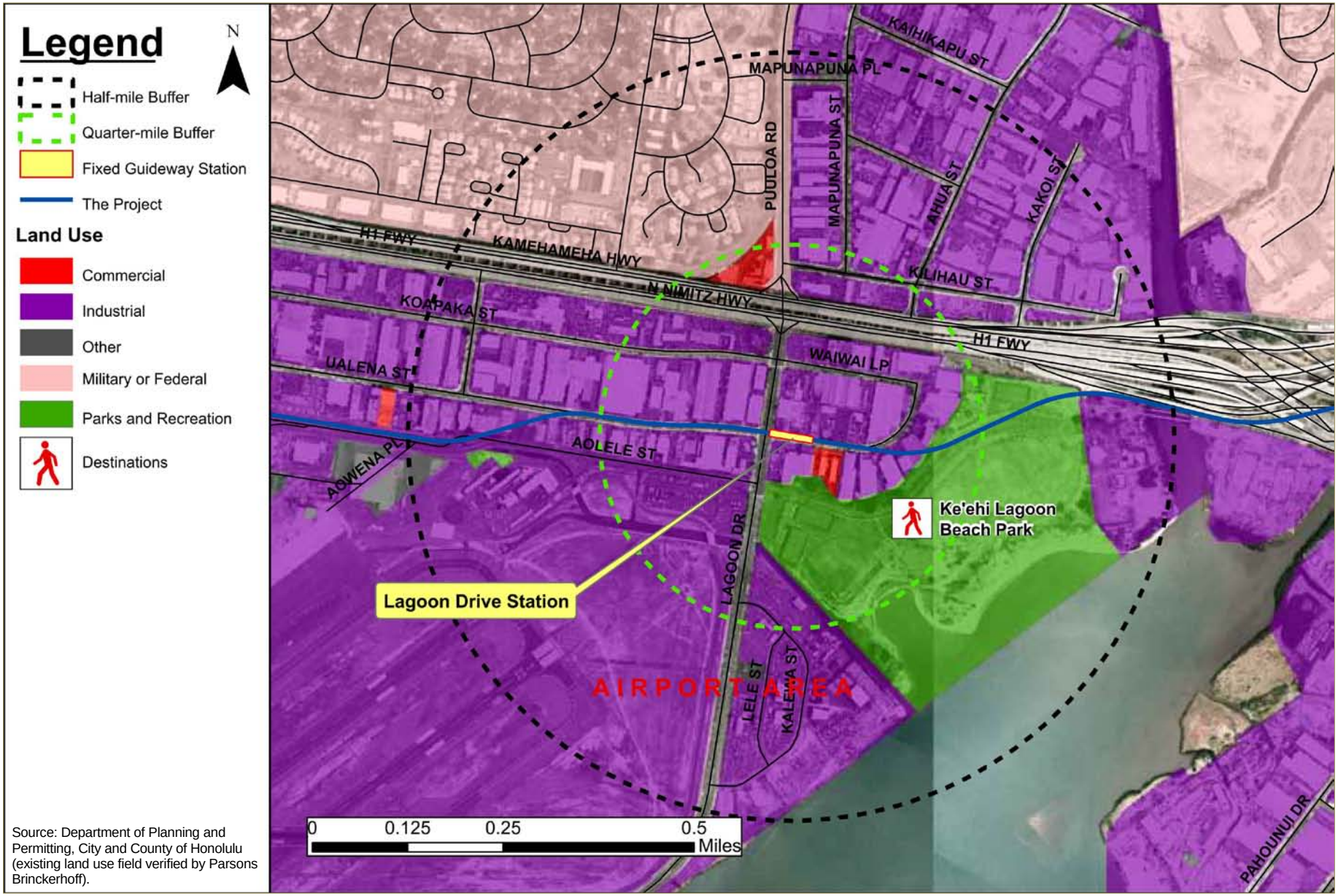
About a quarter of demand at this station will involve riders who will walk or bike to the station. Most of the remaining demand will involve bus transfers that take place on-street near the station entrances. Given the large share of walk/bike and bus trips to and from the station, it will be important for the station to have entrance plazas that provide a safe and comfortable transition between pedestrian paths, bus stops, kiss-and-ride loading zone and the station entrances.

The station entrance plazas should be comfortable, pedestrian-oriented environments for those transferring to buses or waiting for rides while also providing visible and secure areas for bicycle parking. The plazas should also provide efficient and ADA-accessible connections between station entrances, on-street bus stops, and kiss-and-ride and TheHandi-Van loading zones.

Provide clear connections and transparency between station elements

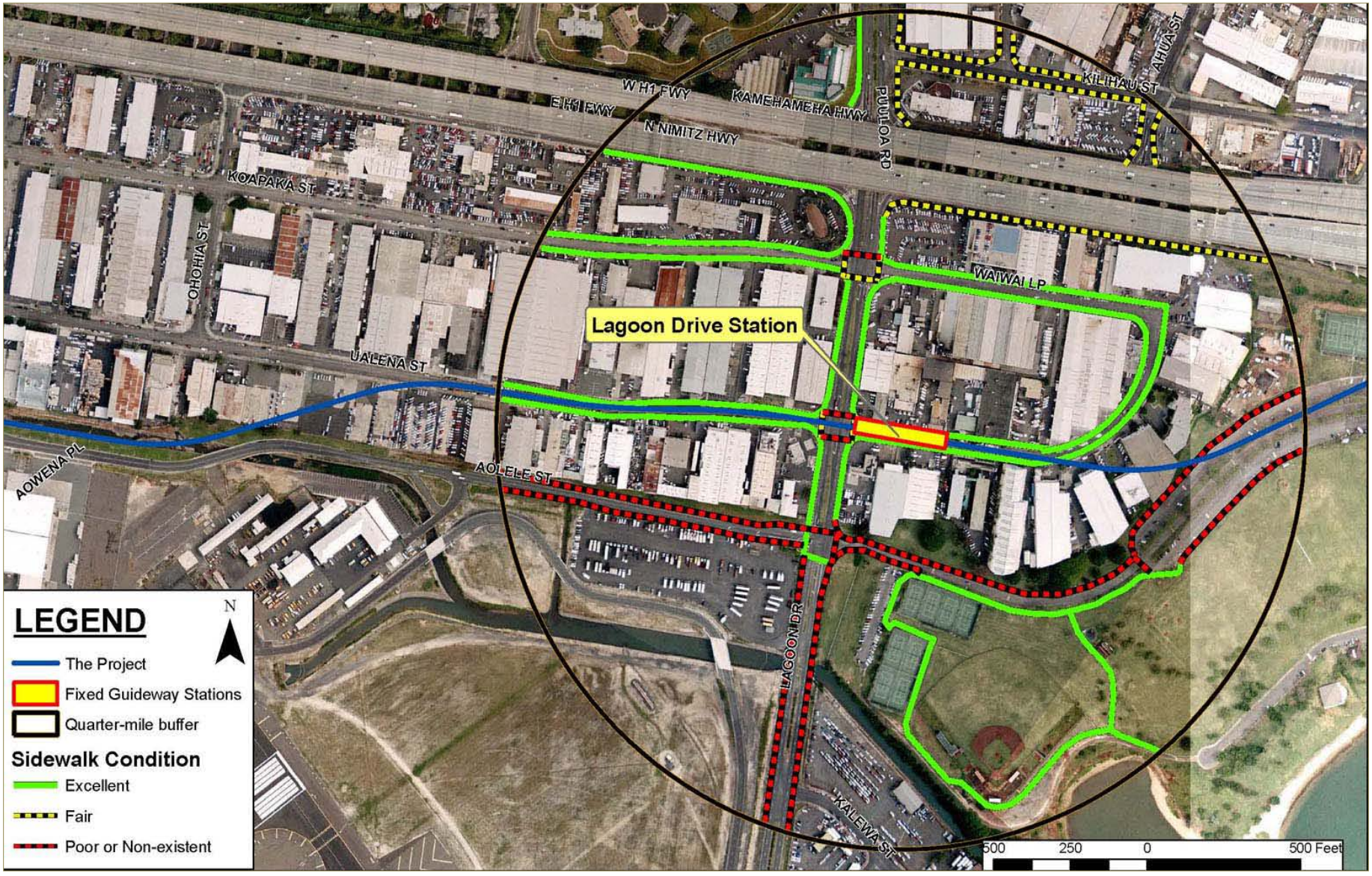
Safe and convenient pedestrian connections between various station elements will be needed, with clear lines of sight between the station entrance and other elements, such as the on-street bus stops and bicycle parking areas.

Lagoon Drive Station—Existing Land Use

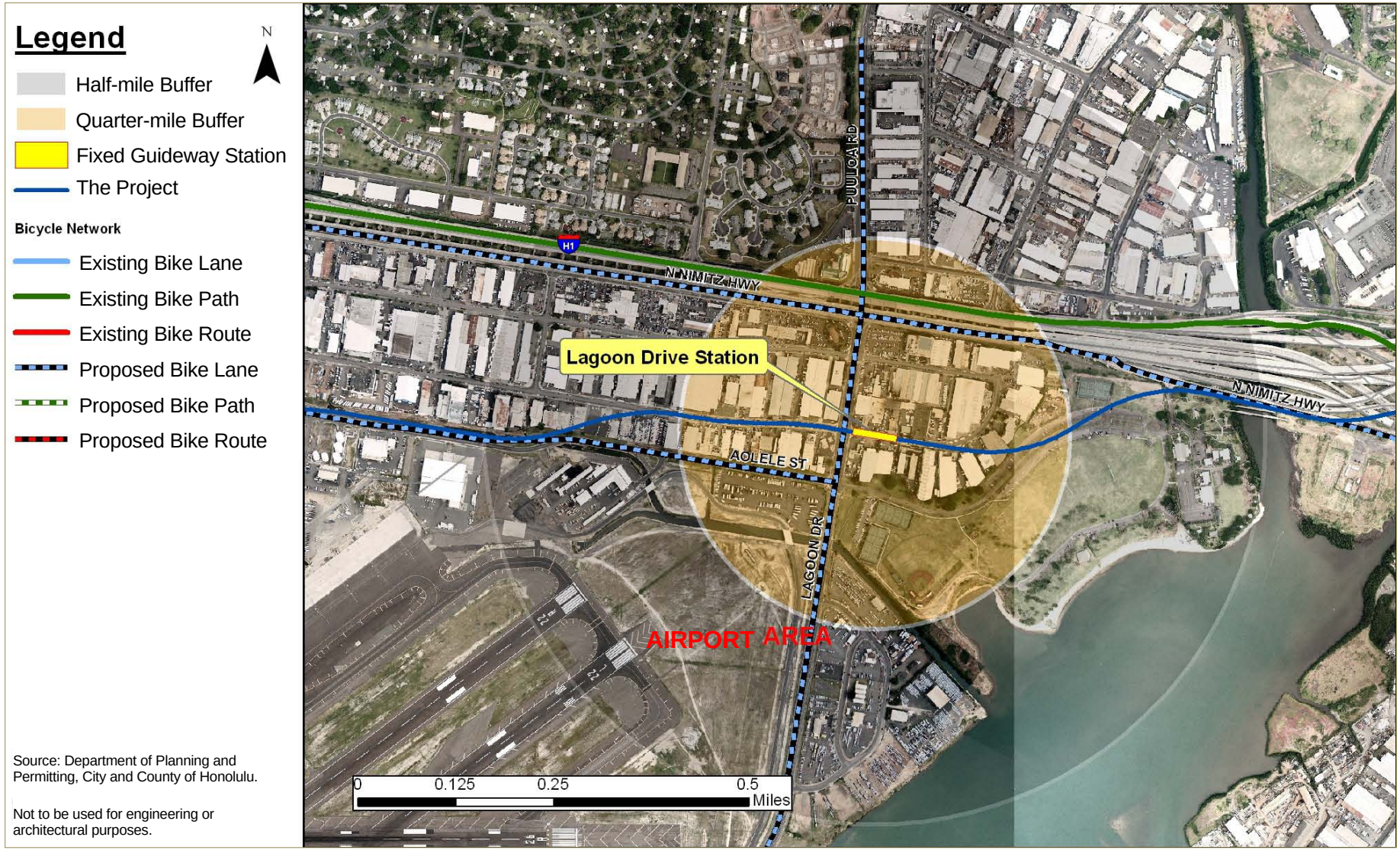


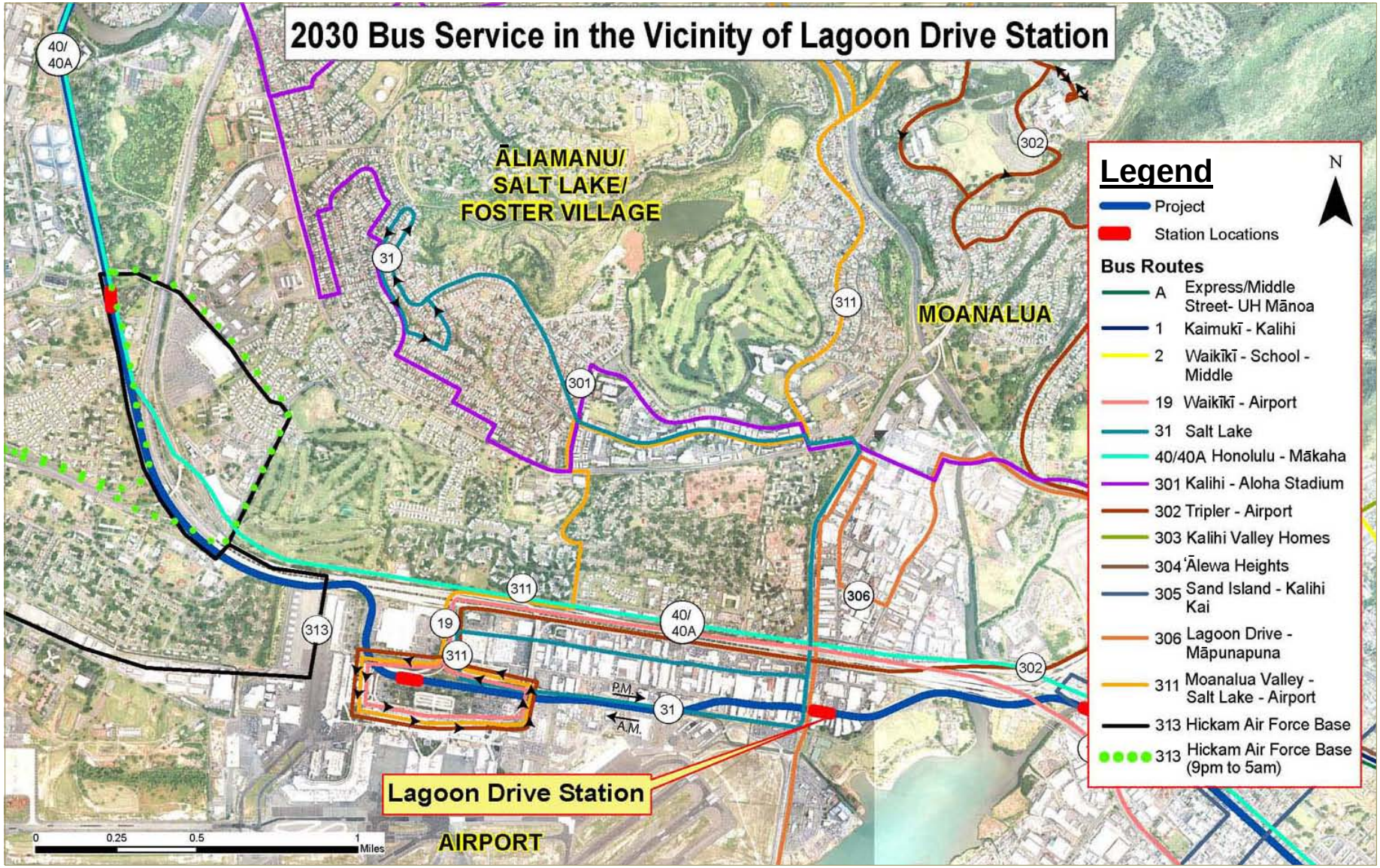
Lagoon Drive Station—Existing Zoning

Lagoon Drive Station—Pedestrian Access

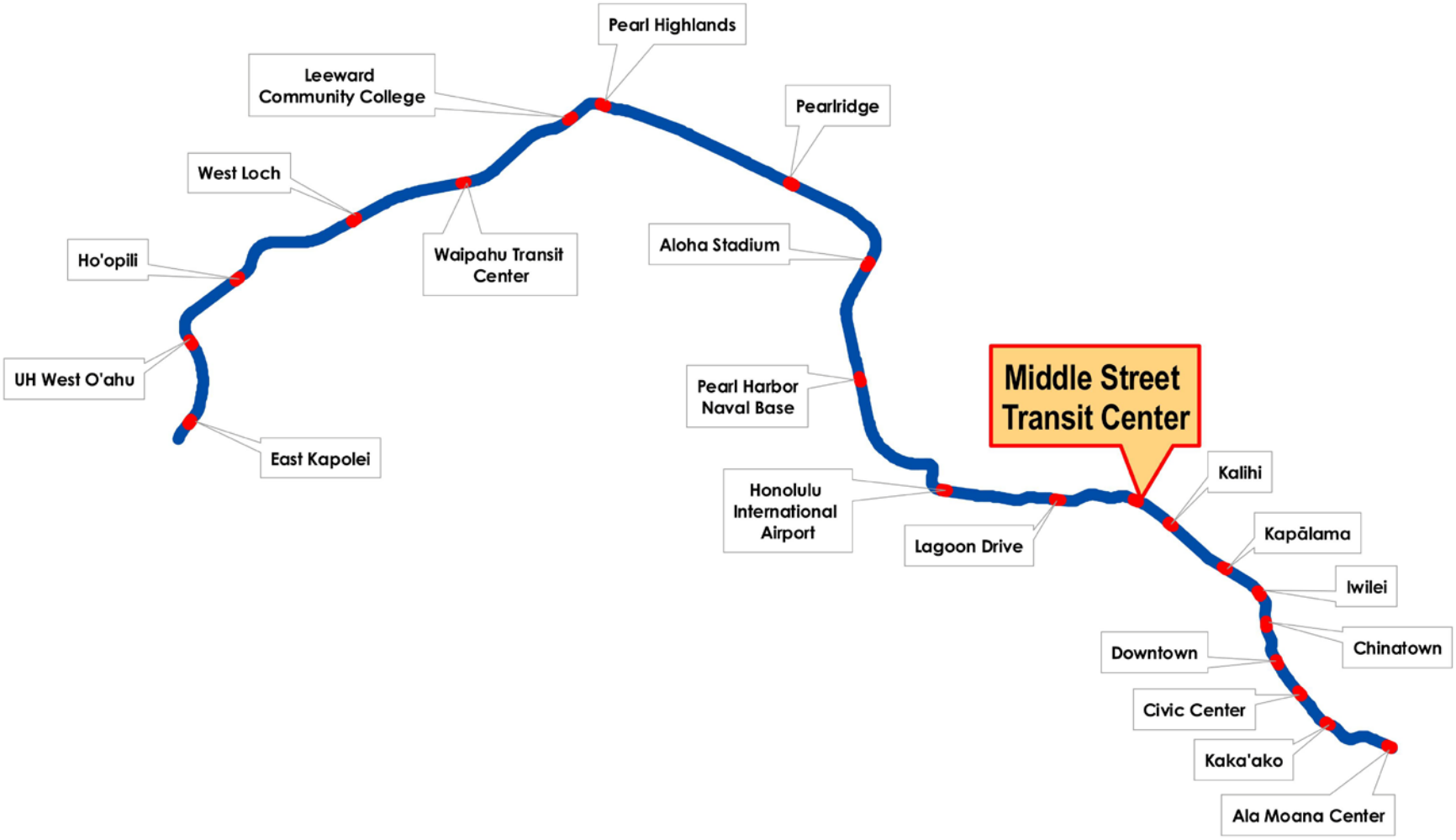


Lagoon Drive Station—Bicycle Access




2030 Bus Service in the Vicinity of Lagoon Drive Station
ĀLIAMANU/
SALT LAKE/
FOSTER VILLAGE
MOANALUA
AIRPORT
Lagoon Drive Station
40/
40A
31
301
311
302
313
19
306
P.M.
A.M.
0
0.25
0.5
1
Miles
N
Legend
Project
Station Locations
Bus Routes
A Express/Middle Street- UH Mānoa
1 Kaimukī - Kalihi
2 Waikīkī - School - Middle
19 Waikīkī - Airport
31 Salt Lake
40/40A Honolulu - Mākaha
301 Kalihi - Aloha Stadium
302 Tripler - Airport
303 Kalihi Valley Homes
304 ʻĀlewa Heights
305 Sand Island - Kalihi Kai
306 Lagoon Drive - Māpunapuna
311 Moanalua Valley - Salt Lake - Airport
313 Hickam Air Force Base
313 Hickam Air Force Base (9pm to 5am)

Middle Street Transit Center Station (MS)



Summary

The Middle Street Transit Center Station will be located on Kamehameha Highway near the Middle Street Intermodal Center (MIC) now under construction by others. The rail station entrance will be located on the mauka side of Kamehameha Highway, within the bus loading zone of the MIC. An overhead concourse will connect the MIC to the rail station.

Site Considerations and Access

Station location and nearby land use

- Maps showing station area land use and zoning are included in this report.
- The station area is dominated by light industrial and commercial land uses with large surface parking lots.
- The nearby MIC mauka of the station (under construction) will serve a large number of daily bus transfers.
- Potential redevelopment in the station area could be limited by nearby highway ramps and the Kalihi Stream.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown on the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- Sidewalks in the area are narrow and incomplete; few crosswalks exist, making walking to the station a challenge.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report (see Transit Access Map).
- Transfers to/from buses will take place primarily at the MIC located mauka of the rail station (see Station Area Site Plan).
- Other bus access will be via the existing bus stops on Kamehameha Highway (see Station Area Site Plan).
- A loading zone for TheHandi-Van will be located at the MIC (see Station Area Site Plan).

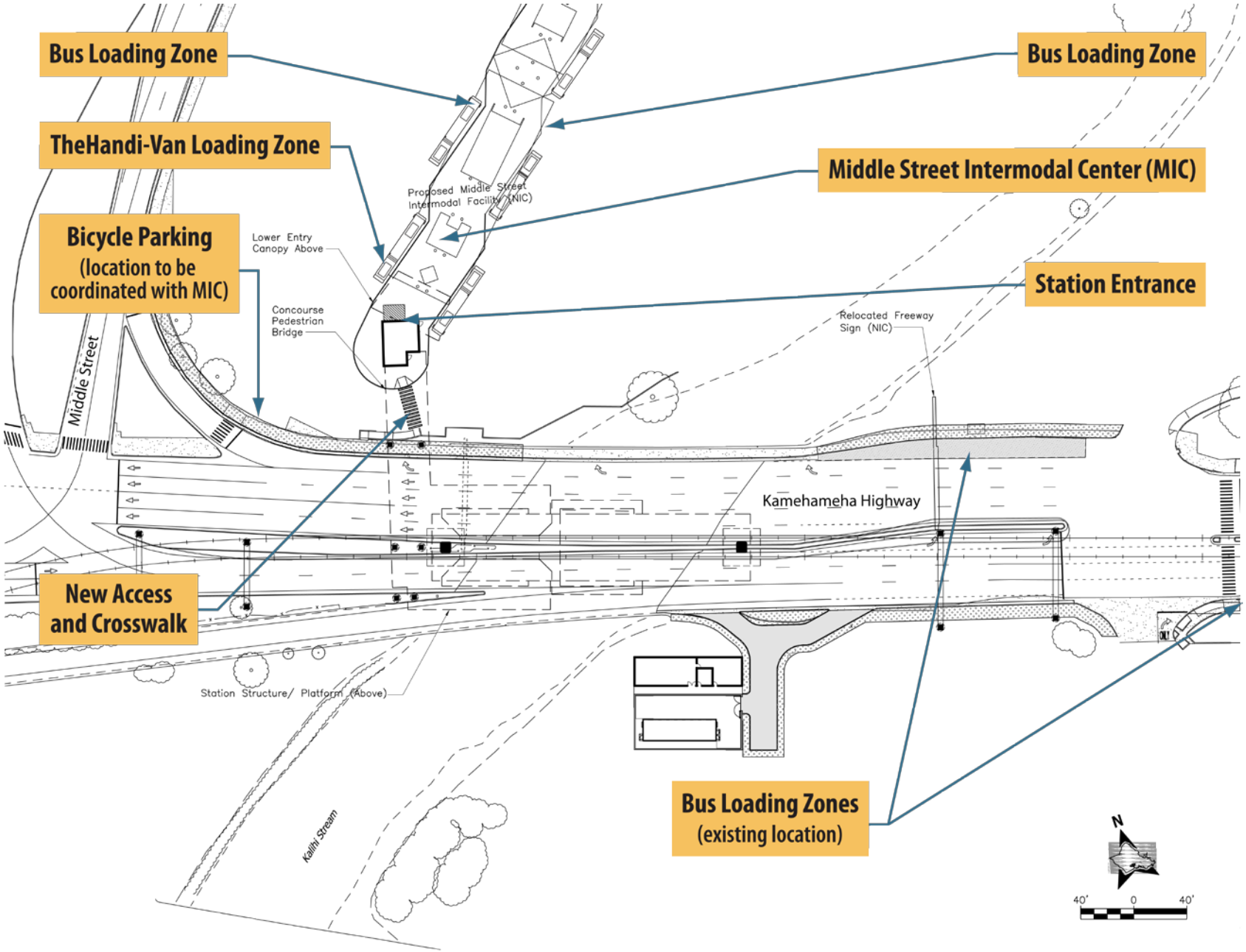
Kiss-and-ride and taxi

- Parking and loading zones for kiss-and-ride patrons and taxis will not be provided as part of this project but may be included in the MIC.

Park-and-ride

- A 1,000-stall park-and-ride facility will be developed by others as part of the MIC.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Middle Street Transit Center station will have relatively modest ridership that will primarily provide access to/from the bus transit center located across Kamehameha Highway opposite the station. The station will have **Side Platforms** accessible from a single entrance on the mauka side of Kamehameha Highway and connected by an overhead walkway. The station entrance will be directly connected to the platform of the MIC.

TheBus will be the dominant access mode. This demand will be accommodated primarily at the MIC. The station entrance will be at the makai end of the transit center providing easy access between rail and bus service. The transit center will also be used by **TheHandi-Van** vehicles. Two existing on-street bus stops are provided on Kamehameha Highway.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions		**Other Vehicle Parking**	
45' Bus Loading Zone	0	Park-and-ride	0
60' Bus Loading Zone	0	Kiss-and-ride	0
Layover	0	Kiss-and-ride loading/unloading	0
***Off-Site** (on-street)*		TheHandi-Van	0
Bus Positions		Taxi	0
Eastbound	1	Tour bus	0
Westbound	1	Private shuttle	0
Northbound	0	Supervisor	0
Southbound	0	Bicycle parking (opening/2030)	20/30

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	320
Alightings	310

Access Mode Daily Trips	
Walk/bike	320
Bus	2,320
Park-and-ride	0
Kiss-and-ride	140
Other	30
Total	2,810

To accommodate **Pedestrian/Bicycle** access, some improvements to existing sidewalks will be made along Kamehameha Highway, and a connection to the transit center will be added. Bike racks will be provided near the station entrance. Also, space should be preserved for future demand and more racks or lockers should be added as needed.

Under a separate contract, a 1,000-stall **Park-and-Ride** facility may be provided near the station at the MIC. If the park-and-ride were to be built, the station would experience higher ridership than currently projected.

Station Site Design Issues and Follow-up

Create comfortable station entrance plazas

As the station will be primarily used by patrons transferring between bus and rail, the connection between the two will need to be designed in a way that provides a safe and comfortable transition. The mauka entrance will serve bus transit and TheHandi-Van passengers coming from the transit center, but it may also serve future park-and-ride users at the MIC. The station entrance should be designed and oriented to accommodate all users.

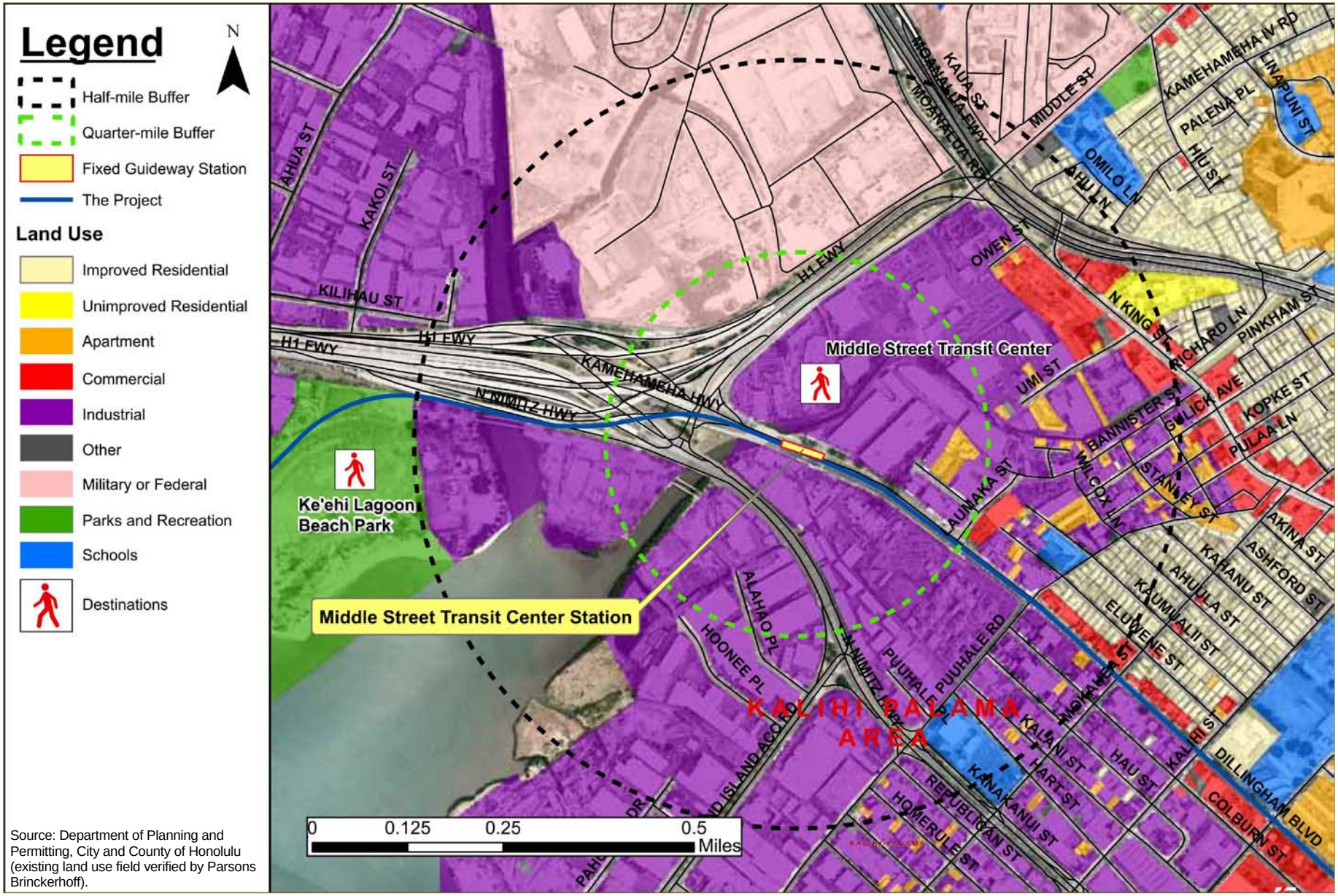
Provide clear connections between station elements

Safe and convenient pedestrian connections between various station elements will be needed, with a clear line of sight between the station entrance and other elements, such as bus stops, sidewalks and bicycle parking areas. There should be recognition of potentially large pedestrian volumes at the station entrance in the vicinity of the MIC.

Accommodate potential future makai entrance

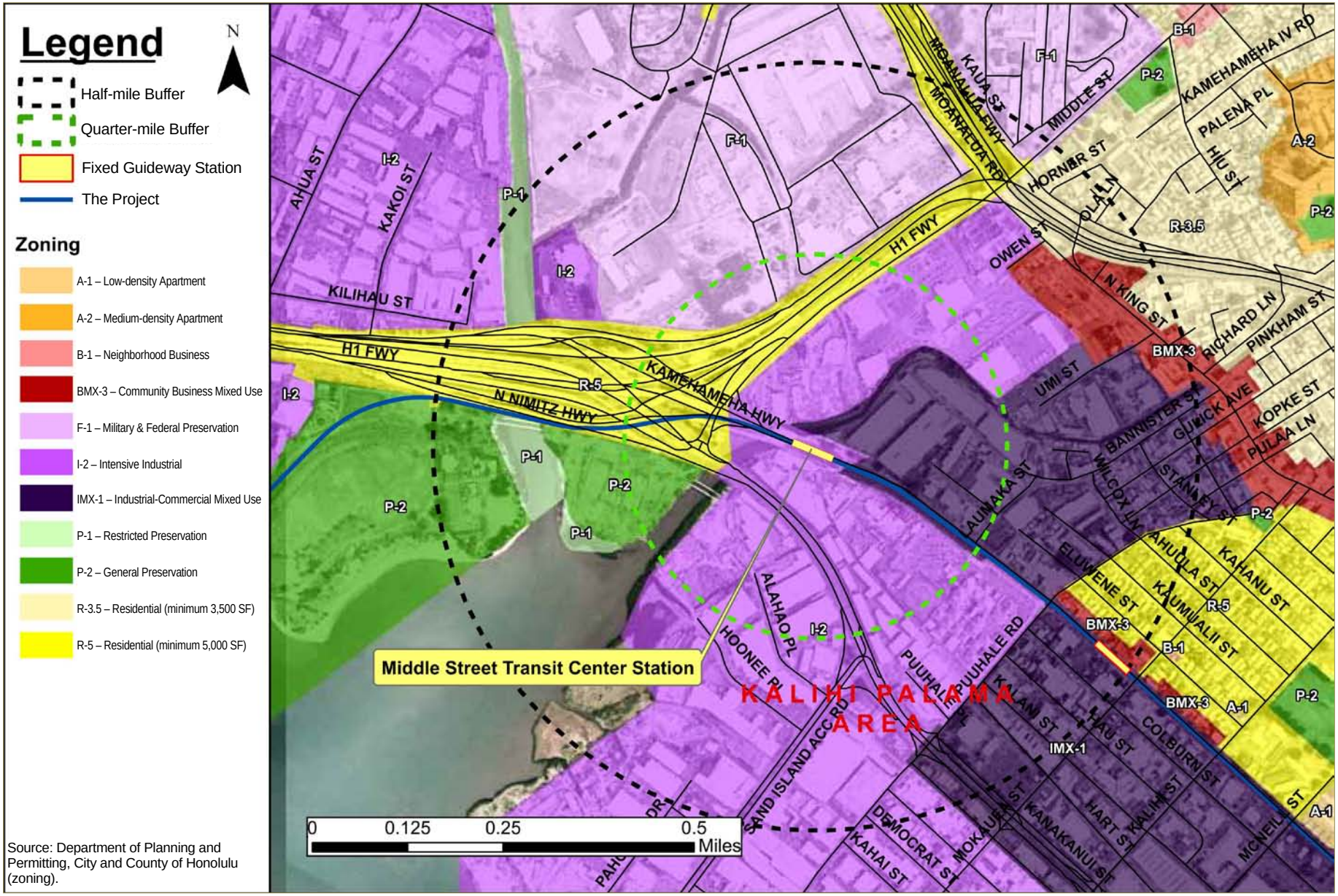
The station will be designed such that an entrance from the makai side of Kamehameha Highway could be added in the future.

Middle Street Transit Center Station—Existing Land Use

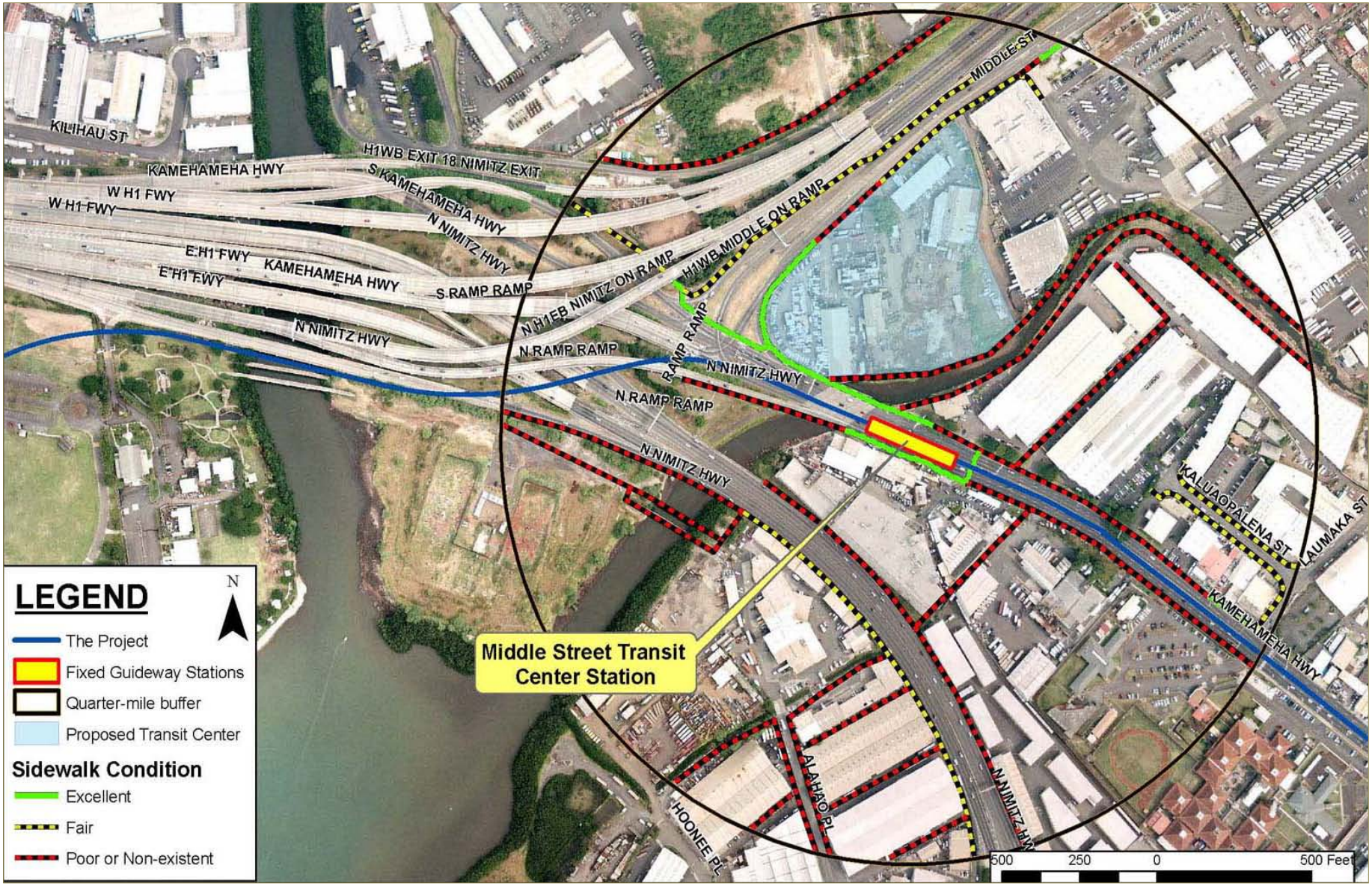


Source: Department of Planning and Permitting, City and County of Honolulu (existing land use field verified by Parsons Brinckerhoff).

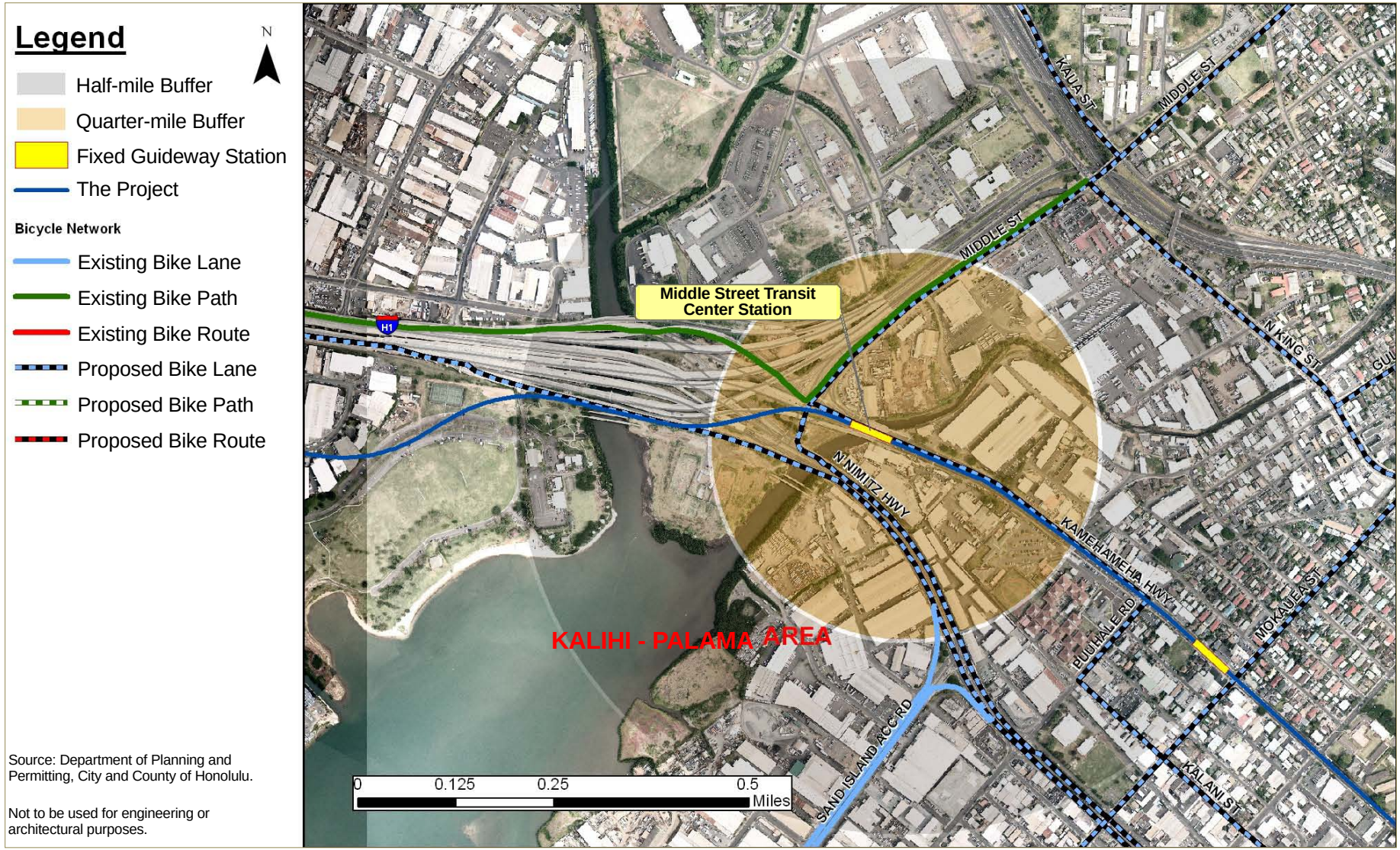
Middle Street Transit Center Station—Existing Zoning

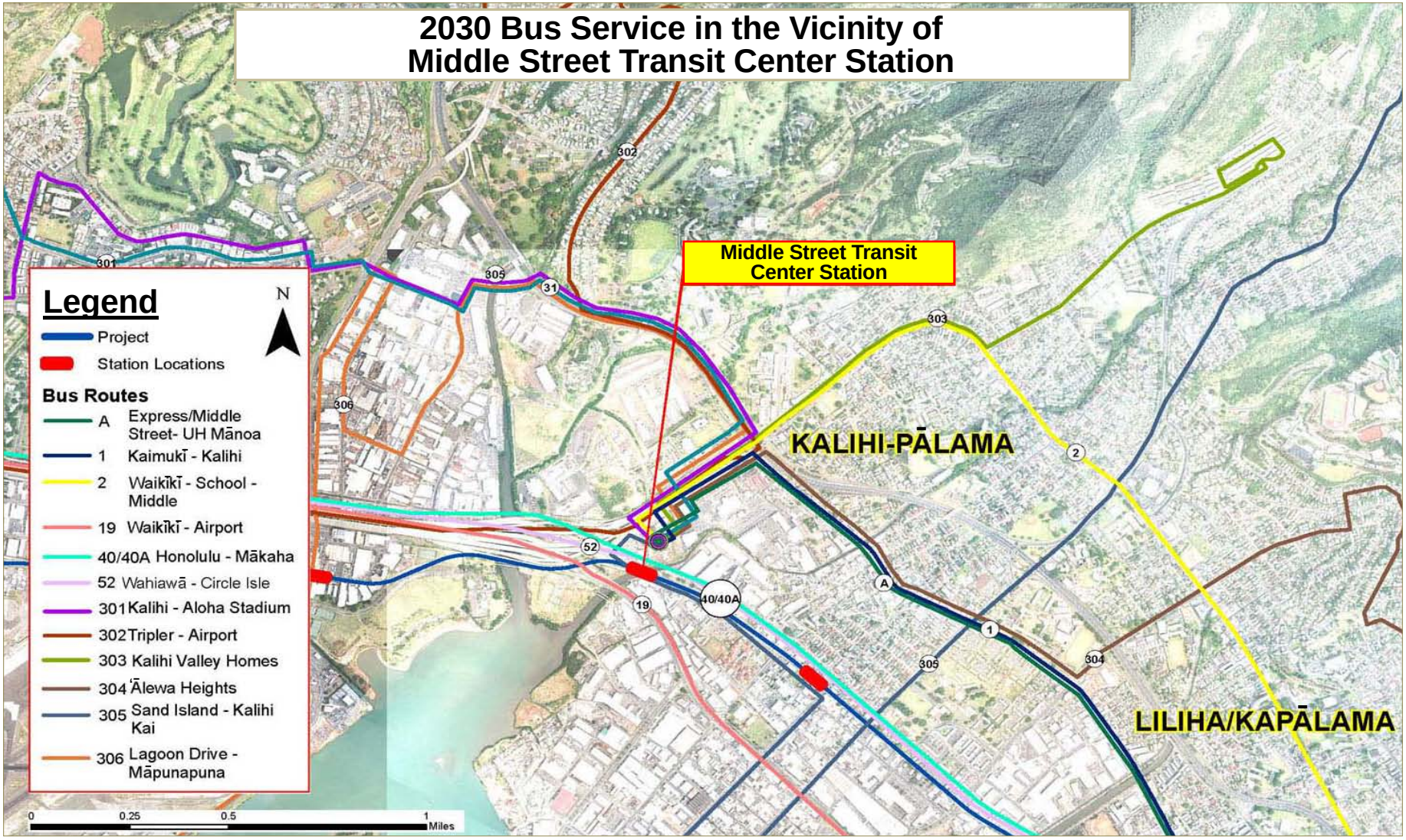


Middle Street Transit Center Station—Pedestrian Access

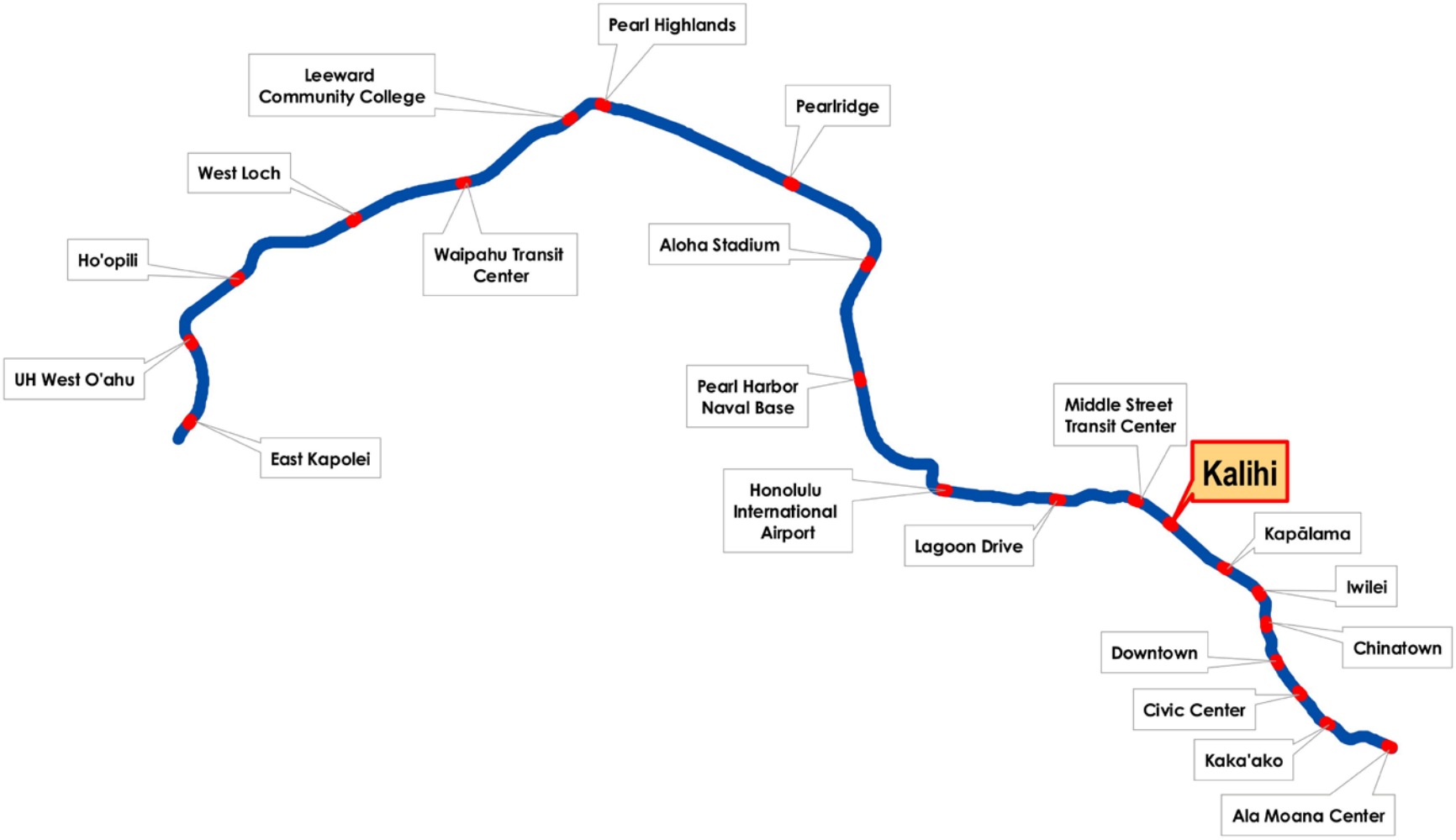


Middle Street Transit Center Station—Bicycle Access




2030 Bus Service in the Vicinity of
Middle Street Transit Center Station
Middle Street Transit Center Station
KALIHI-PĀLAMA
LILIHA/KAPĀLAMA
Legend
N
Project
Station Locations
Bus Routes
A Express/Middle Street- UH Mānoa
1 Kaimukī - Kalihi
2 Waikīkī - School - Middle
19 Waikīkī - Airport
40/40A Honolulu - Mākaha
52 Wahiawā - Circle Isle
301 Kalihi - Aloha Stadium
302 Tripler - Airport
303 Kalihi Valley Homes
304 ʻĀlewa Heights
305 Sand Island - Kalihi Kai
306 Lagoon Drive - Māpunapuna
0 0.25 0.5 1 Miles

Kalihi Station (KH)



Summary

The Kalihi Station will be located on the median of Dillingham Boulevard at Mokauea Street. Station entrances will be located on either side of Dillingham Boulevard. A concourse will not be provided.

Site Considerations and Access

Station location and nearby land uses

- Maps showing station area land use and zoning are included in this report.
- The station will be located in an older urban area on a busy street near the center of Kalihi.
- The area includes primarily residential development mauka of Dillingham Boulevard and mostly industrial and commercial uses on the makai side.
- The area is mostly built-out on small lots, so major redevelopment is not expected.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown on the station area site plan to the right and in the Pedestrian and Bicycle Access Maps on the following pages.
- Dillingham Boulevard is a busy, heavily travelled road with narrow lanes and sidewalks, making conditions difficult for bicyclists and pedestrians.
- Although the area has many pedestrians, sidewalks tend to be narrow, discontinuous, and in need of repair.
- Walk and bike access to the station will need to be supported by station plazas, improved sidewalks, and associated wayfinding.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report (see Transit Access Map).
- Transfers to/from buses will take place at on-street bus stops located on Dillingham Boulevard and Mokauea Street (see Station Area Site Plan).
- TheHandi-Van loading area will be located on-street near one of the station entrances (see Station Area Site Plan).

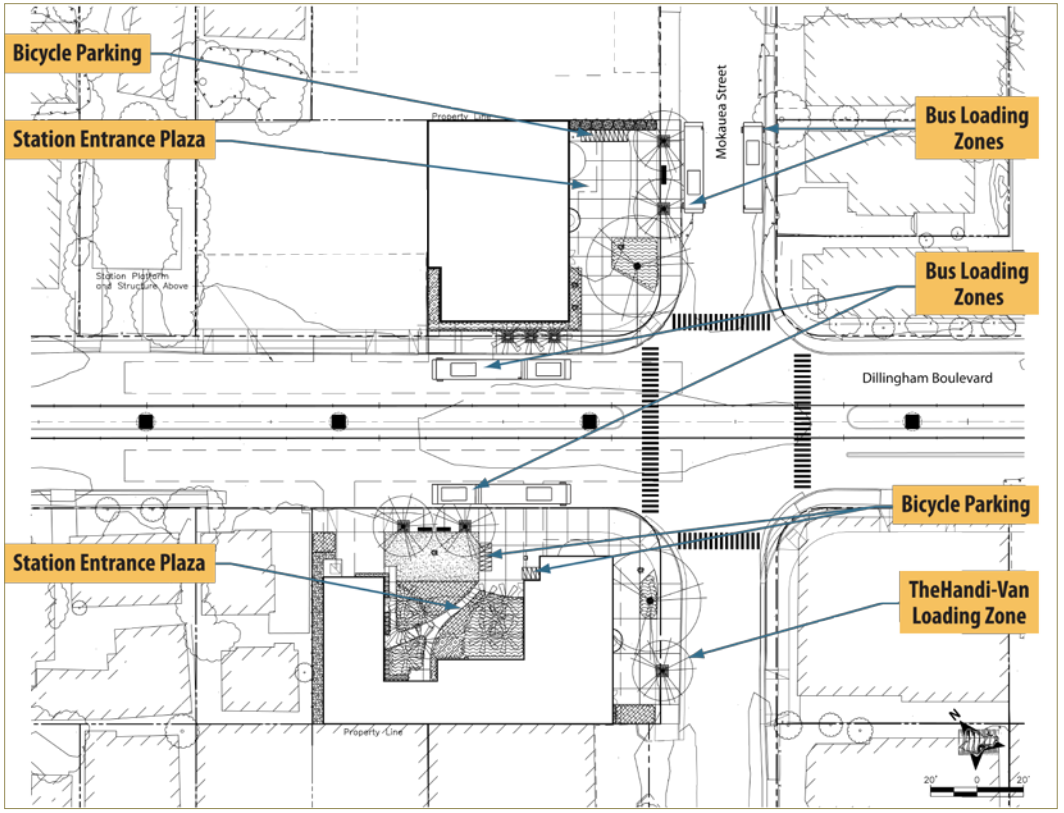
Kiss-and-ride and taxi

- Parking and loading zones for kiss-and-ride patrons and taxis will not be provided at this station.

Park-and-ride

- A park-and-ride facility will not be provided at this station.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Kalihi will be a medium-use station with a high projected share and volume of walk/bike trips. The station will have **Side Platforms** accessible from entrances on either side of Dillingham Boulevard. Since each entrance will serve only one direction, more pedestrian traffic will be crossing the street to make bus connections and other trips. This will make the design of these street elements more important.

TheBus transfers will account for about one-third of total demand at Kalihi Station. This demand will be accommodated at two bus stops on Dillingham Boulevard and two stops on Mokauea Street. To accommodate **TheHandi-Van** passengers, a loading zone will be provided on Mokauea Street near one of the station entrances.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions		**Other Vehicle Parking**	
45' Bus Loading Zone	0	Park-and-ride	0
60' Bus Loading Zone	0	Kiss-and-ride	0
Layover	0	Kiss-and-ride loading/unloading	0
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	0
Eastbound	1	Tour bus	0
Westbound	1	Private shuttle	0
Northbound	1	Supervisor	0
Southbound	1	Bicycle parking (opening/2030)	20/40

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	260
Alightings	450

Access Mode Daily Trips	
Walk/bike	2,180
Bus	1,200
Park-and-ride	0
Kiss-and-ride	200
Other	50
Total	3,630

Some improvements to existing sidewalks will be important for **Pedestrian/Bicycle** access as well as calming of traffic, particularly along Dillingham Boulevard. Parking spaces for 20 bicycles should be provided at the station entrances; bicycle parking should be evenly distributed between station entrances (at least 10 at each entrance). Also, space should be preserved for future demand and more racks or lockers should be added as needed.

Station Site Design Issues and Follow-up

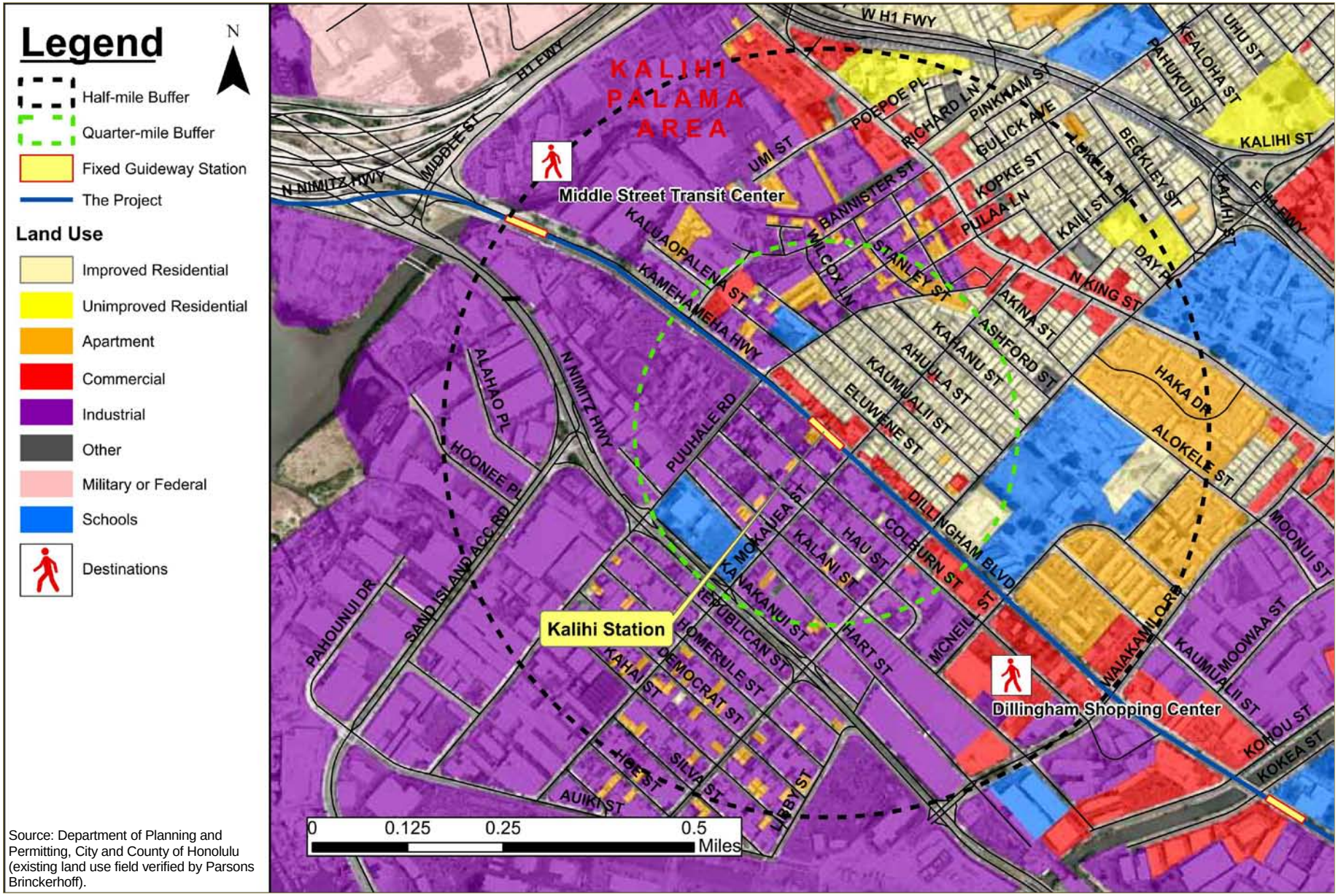
Create comfortable station entrance plazas

To accommodate bus transfers as well as those walking or biking to the station, large pedestrian plazas will be needed to provide a safe and comfortable transition between the sidewalk network and each station entrance. Station entrance plazas should be comfortable pedestrian environments that provide visible secure spaces for bicycle parking and efficient, easily accessible pedestrian connections between station entrances, buses, and nearby developments, with a clear line of sight between the entrance and other elements, such as on-street bus stops.

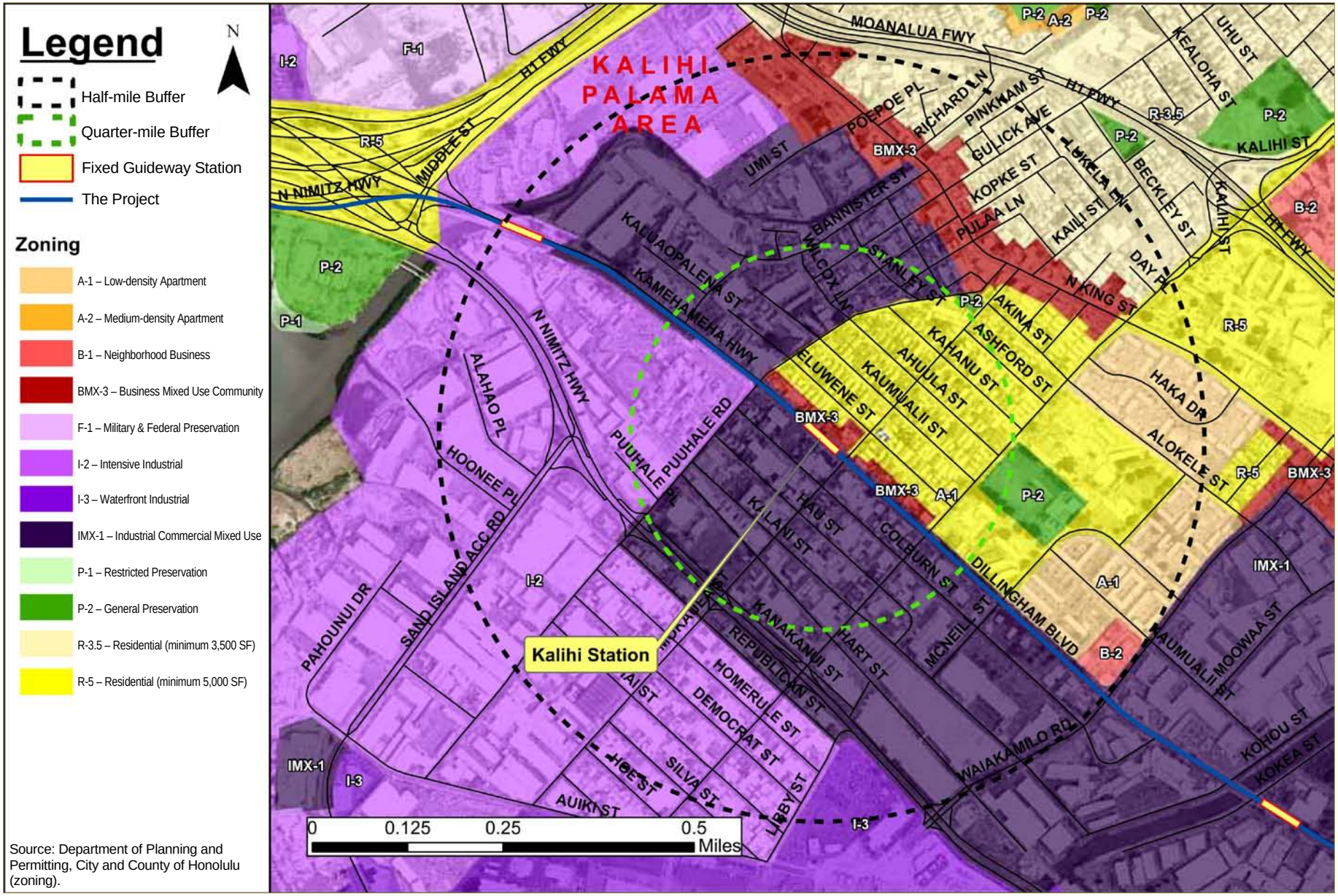
Coordination with other agencies

An on-street loading zone for TheHandi-Van will be provided on Mokauea Street near one of the station entrances, in a location where an existing driveway will be closed as part of the station design. Also, new bus stops will be established on Mokauea Street to serve the bus routes heading mauka. Coordination with the City and County of Honolulu Department of Transportation Services will be needed to ensure the loading zones and bus stops are properly located.

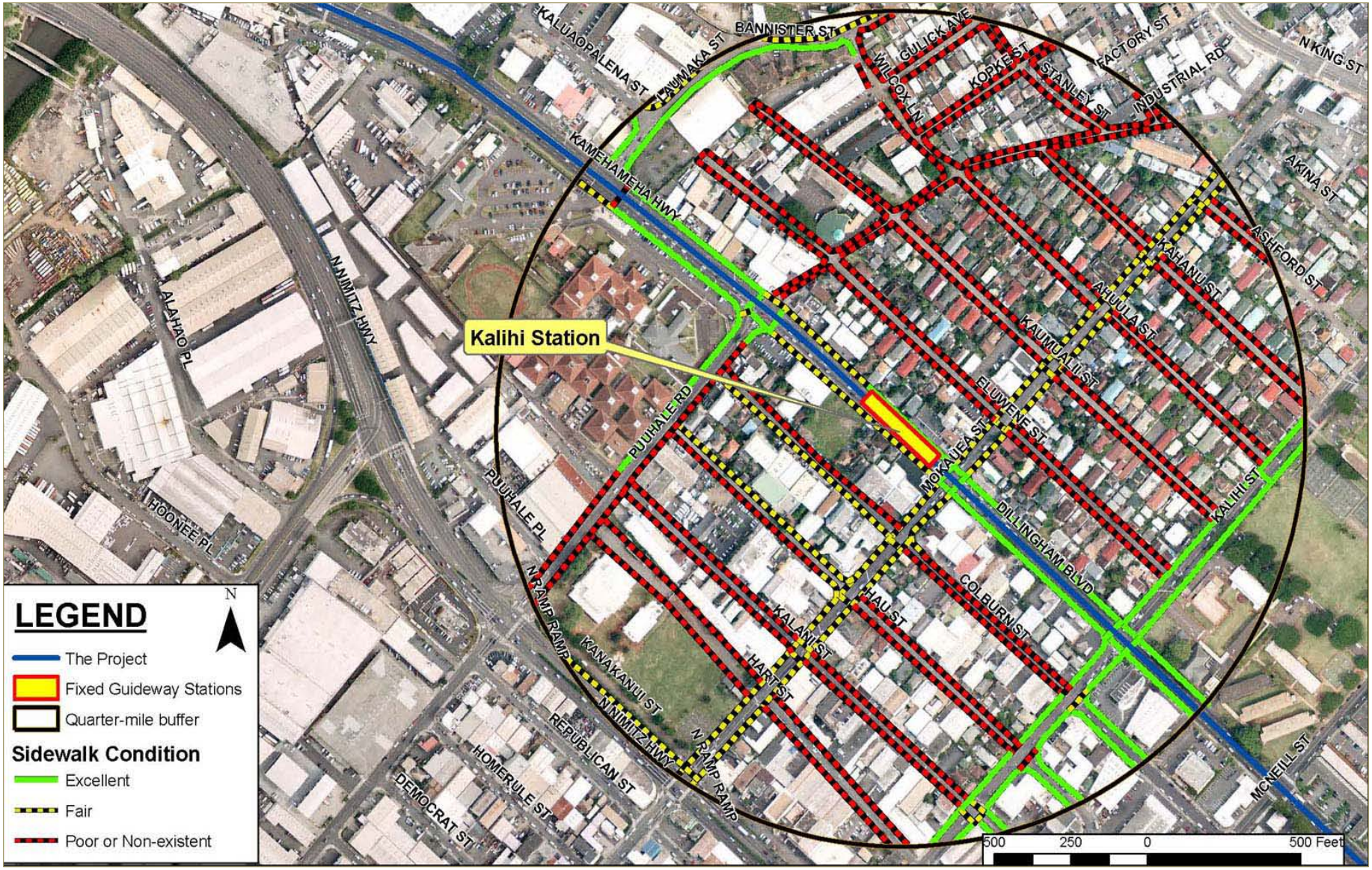
Kalihi Station—Existing Land Use

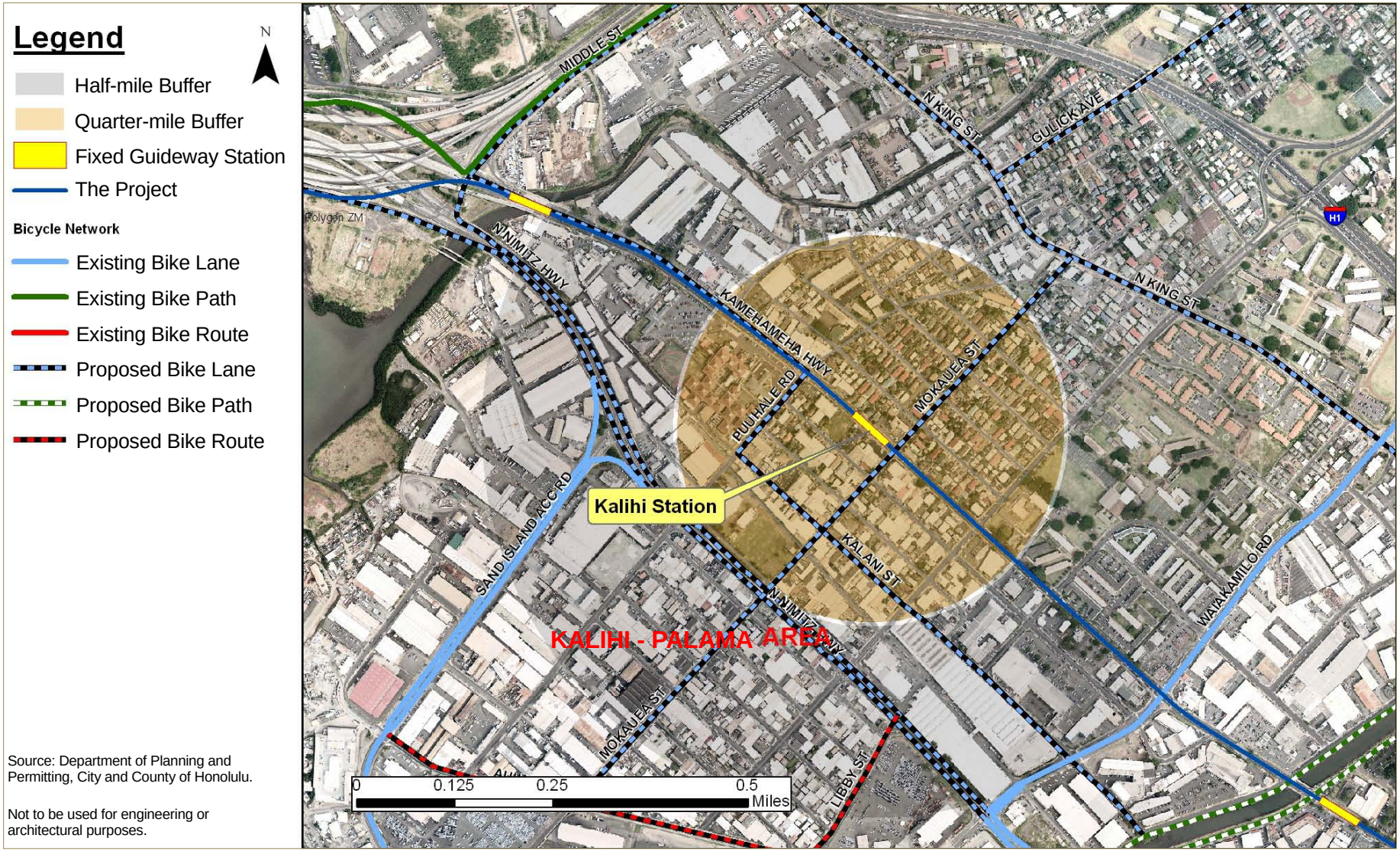


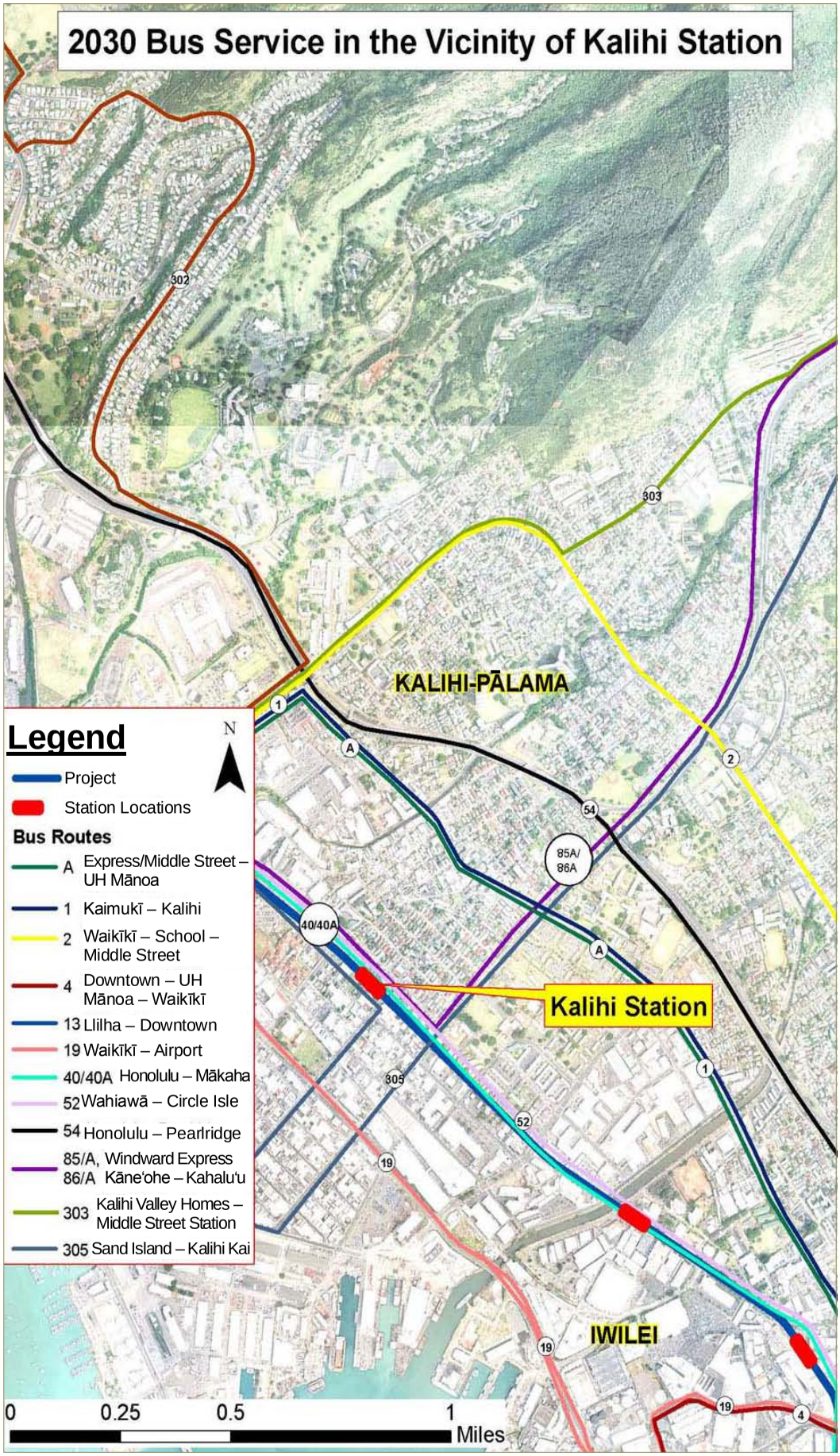
Source: Department of Planning and Permitting, City and County of Honolulu (existing land use field verified by Parsons Brinckerhoff).



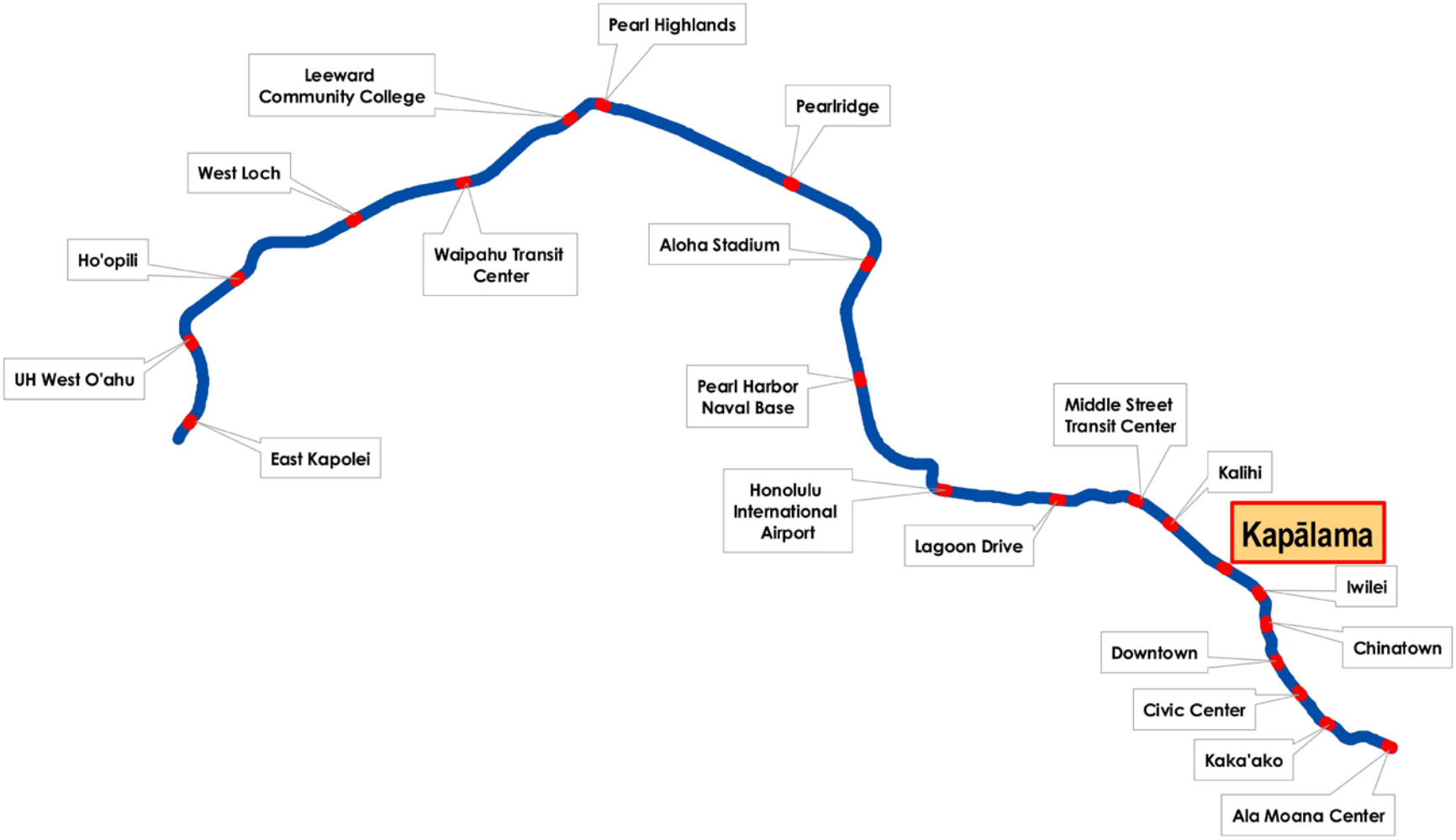
Source: Department of Planning and Permitting, City and County of Honolulu (zoning).


Kalihi Station
KALUAOPALENA ST
LAUMAKA ST
BANNISTER ST
GULICK AVE
WILCOX LN
KOPKE ST
STANLEY ST
FACTORY ST
INDUSTRIAL RD
N KING ST
AKINA ST
ASHFORD ST
KAHANU ST
AHUULA ST
KAUMUALII ST
ELUWENE ST
MOKAULEA ST
KALIHI ST
DILLINGHAM BLVD
COLBURN ST
HAU ST
KALANI ST
HART ST
KAMEHAMEHA HWY
NIMITZ HWY
ALAHAO PL
HOONEE PL
PUUHALE RD
PUUHALE PL
N RAMP RAMP
KANAKANUI ST
REPUBLICAN ST
HOMERULE ST
DEMOCRAT ST
MCNEILL ST
LEGEND
N
The Project
Fixed Guideway Stations
Quarter-mile buffer
Sidewalk Condition
Excellent
Fair
Poor or Non-existent
500 250 0 500 Feet


Legend
N
Half-mile Buffer
Quarter-mile Buffer
Fixed Guideway Station
The Project
Bicycle Network
Existing Bike Lane
Existing Bike Path
Existing Bike Route
Proposed Bike Lane
Proposed Bike Path
Proposed Bike Route
Source: Department of Planning and Permitting, City and County of Honolulu.
Not to be used for engineering or architectural purposes.
MIDDLE ST
N KING ST
GULICK AVE
H1
Polygon ZM
N NIMITZ HWY
KAMEHAMEHA HWY
MOKAUEA ST
PUUHALE RD
Kalihi Station
SAND ISLAND ACC RD
KALANI ST
KALIHI - PALAMA AREA
WAIAKAMILO RD
LIBBY ST
0
0.125
0.25
0.5
Miles


2030 Bus Service in the Vicinity of Kalihi Station
KALIHI-PĀLAMA
IWILEI
Kalihi Station
Legend
N
Project
Station Locations
Bus Routes
A Express/Middle Street – UH Mānoa
1 Kaimukī – Kalihi
2 Waikīkī – School – Middle Street
4 Downtown – UH Mānoa – Waikīkī
13 Llilha – Downtown
19 Waikīkī – Airport
40/40A Honolulu – Mākaha
52 Wahiawā – Circle Isle
54 Honolulu – Pearlridge
85/A, 86/A Windward Express Kāneʻohe – Kahaluʻu
303 Kalihi Valley Homes – Middle Street Station
305 Sand Island – Kalihi Kai
0 0.25 0.5 1 Miles

Kapālama Station (KL)



Summary

Kapālama Station will be located on Dillingham Boulevard at Kōkea Street. Station entrances, located on either side of Dillingham Boulevard, will lead to side platforms above.

Site Considerations and Access

Station location and nearby land uses

- Maps showing station area land use and zoning are included in this report.
- The station area contains a mix of educational (Honolulu Community College), retail, industrial, and residential land uses.
- The station will be located in an older urban neighborhood on a busy street.
- Mauka of the station, land use is dominated by Honolulu Community College but there is also moderate-density housing and retail. On the makai side of the station, there is a mix of commercial and industrial uses.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown on the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- Dillingham Boulevard is a busy, heavily travelled street with narrow lanes and sidewalks, making it difficult for pedestrians and bicyclists.
- Honolulu Community College, located on the mauka side, is a major travel generator in the station area, with many pedestrians and bicycles during school hours.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report (see Transit Access Map).
- Transfers to/from buses will take place at on-street bus stops located on either side of Dillingham Boulevard (see Station Area Site Plan).
- TheHandi-Van loading areas will be located on Kōkea Street and Dillingham Boulevard near the mauka station entrance (see Station Area Site Plan).

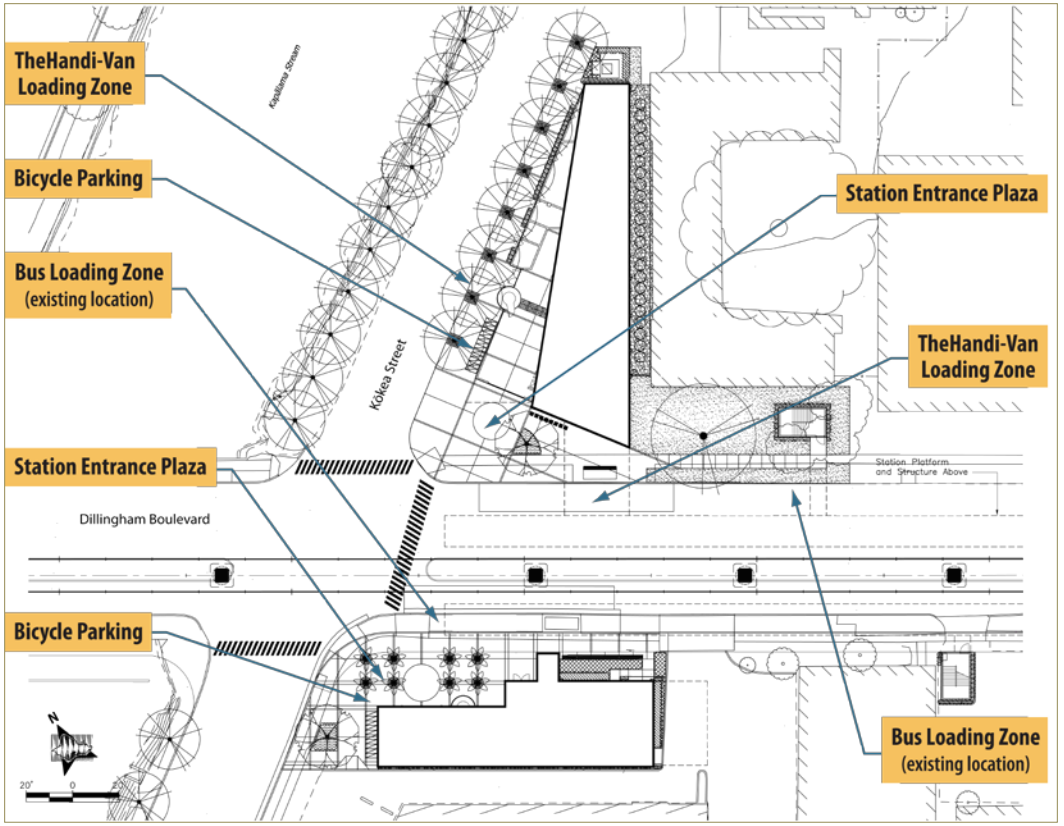
Kiss-and-ride and taxi

- Parking and loading zones for kiss-and-ride patrons and taxis will not be provided at this station.

Park-and-ride

- A park-and-ride facility will not be provided at this station.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Kapālama station will have relatively modest usage and is intended to accommodate a high projected share of walk/bike trips. The station will have **Side Platforms** accessible from entrances on either side of Dillingham Boulevard. Since each station entrance will serve only one direction, more pedestrian traffic will be crossing the street to make bus connections and other trips. This will make the design of these street elements more important.

TheBus demand will be accommodated at existing on-street bus stops on Dillingham Boulevard which are adjacent to the rail station entrance buildings. **TheHandi-Van** vehicles will use loading zones to be established on Kōkea Street and Dillingham Boulevard near the mauka station entrance.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions		**Other Vehicle Parking**	
45’ Bus Loading Zone	0	Park-and-ride	0
60’ Bus Loading Zone	0	Kiss-and-ride	0
Layover	0	Kiss-and-ride loading/unloading	0
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	0
Eastbound	1	Tour bus/private shuttle	0
Westbound	1	Supervisor	0
Northbound	0	Bicycle parking (opening/2030)	20/20
Southbound	0		

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	80
Alightings	300

Access Mode Daily Trips	
Walk/bike	1,830
Bus	330
Park-and-ride	0
Kiss-and-ride	60
Other	10
Total	2,230

Pedestrian/Bicycle access will have the largest portion of daily station demand. Bike racks should be provided at each station entrance; bicycle parking should be evenly distributed among station entrances (at least ten at each entrance). Also, space should be preserved for future demand and more racks or lockers should be added as needed.

Station Site Design Issues and Follow-up

Create comfortable station entrance plazas

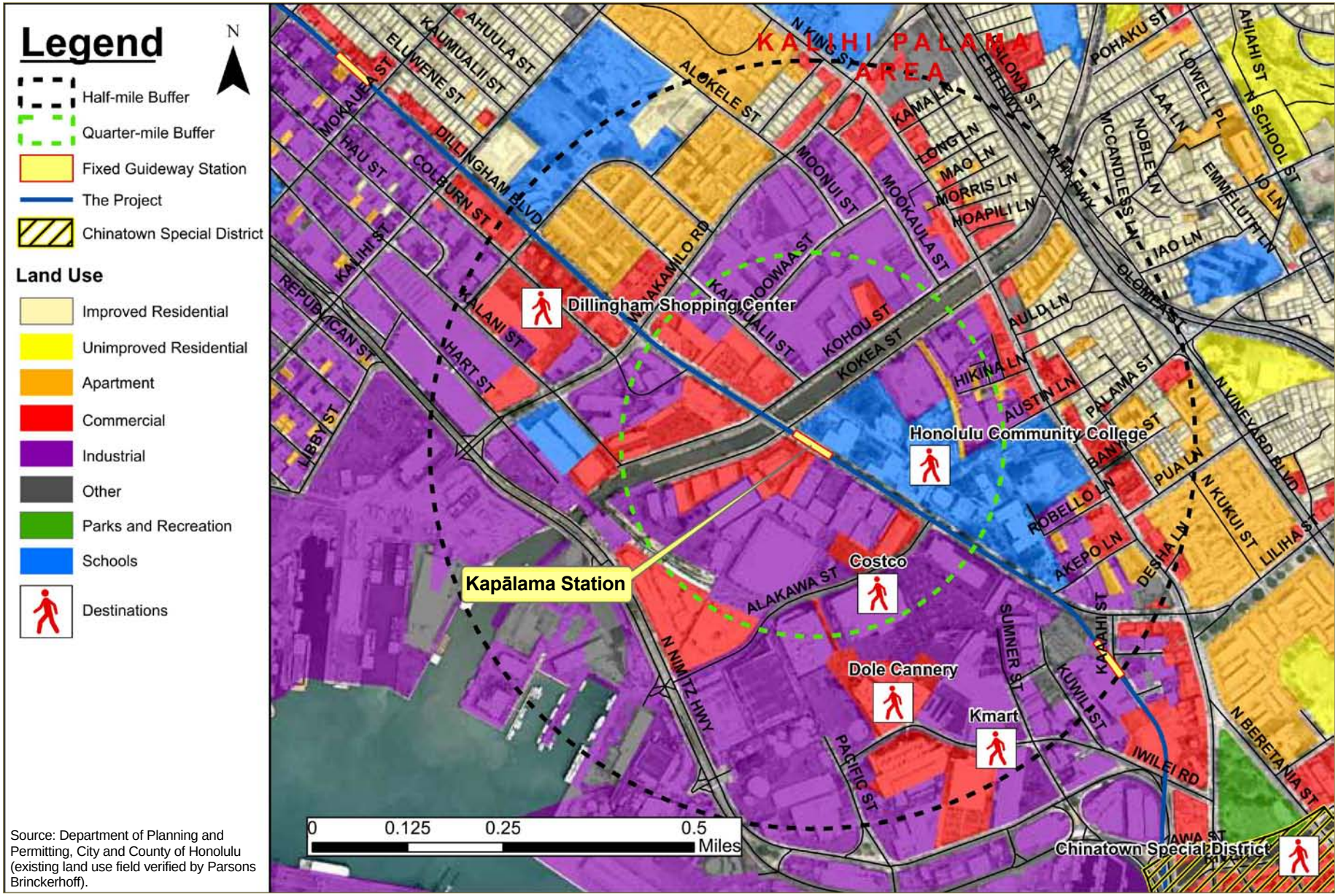
Since walking/biking will be the overwhelmingly dominant access mode to/from the station, It will be important for Kapālama to have large pedestrian plazas that provide a safe and comfortable transition between activities in the station area and each entrance. Station entrance plazas should be comfortable pedestrian environments that provide visible, secure spaces for bicycle parking and efficient and easily accessible connections between station entrances, bus stops, and nearby developments. The bus shelters should blend in with the rail station design to help support the transfer process.

The mauka and makai entrances will serve bus transit and TheHandi-Van passengers coming from Dillingham Boulevard and Kōkea Street. The mauka entrance will also serve pedestrians/bicyclists on Dillingham Boulevard, including demand from Honolulu Community College.

Provide clear connections between station elements

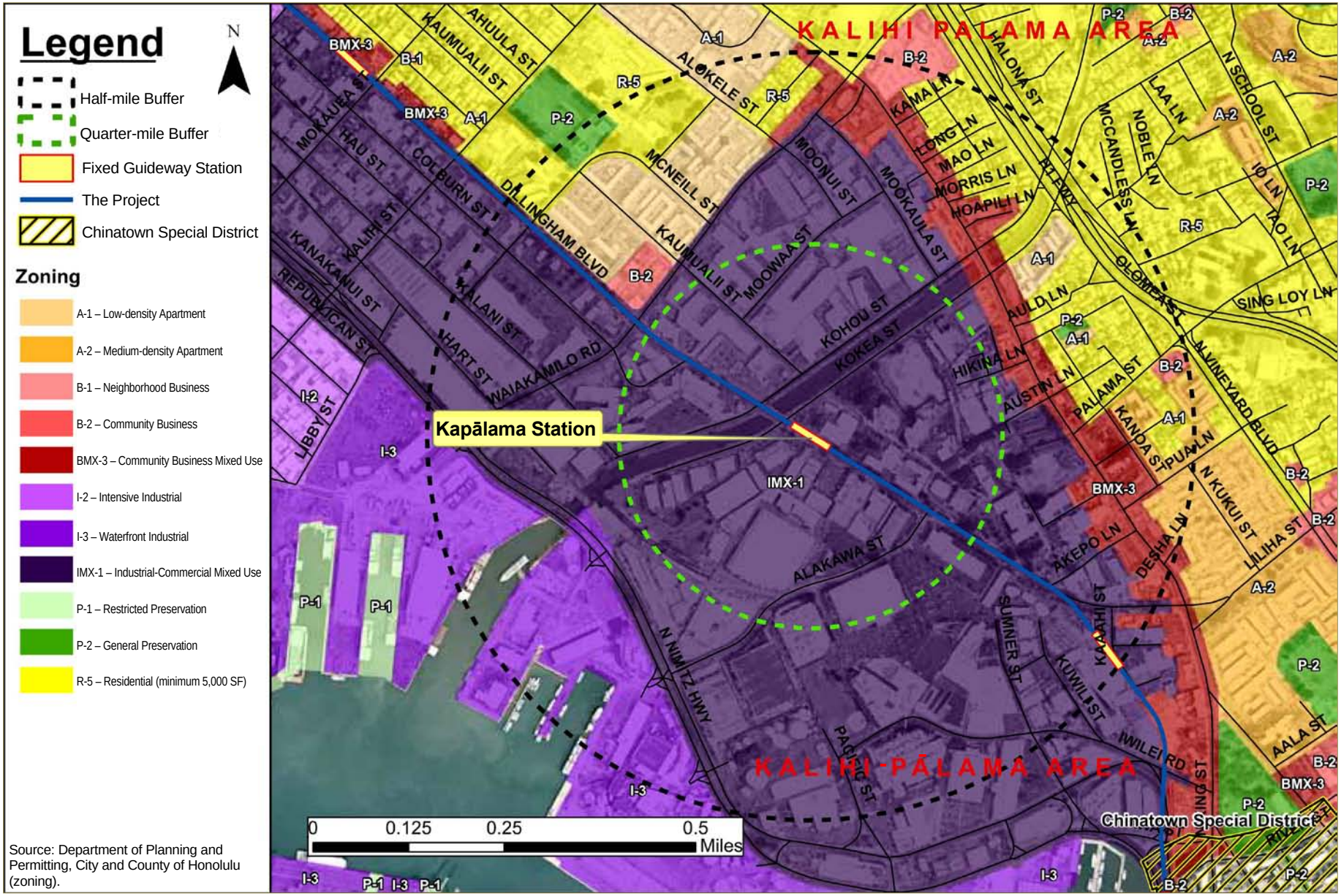
Safe and convenient pedestrian connections between various station elements will be needed, with a clear line of sight between the station entrances and other elements, such as bus stops and sidewalks. There should be recognition of potentially large pedestrian volumes at the mauka station entrance in the vicinity of Honolulu Community College.

Kapālama Station—Existing Land Use

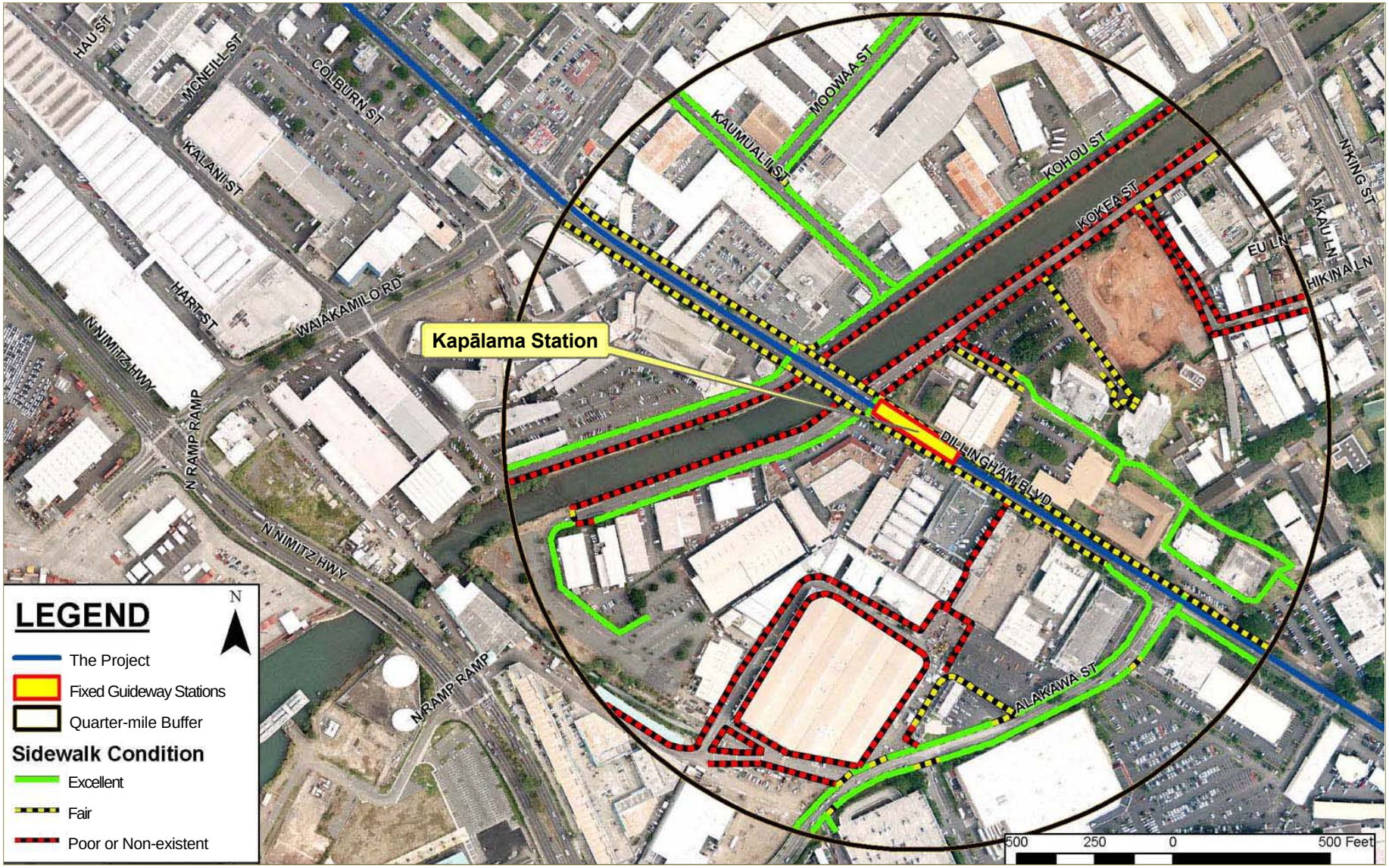


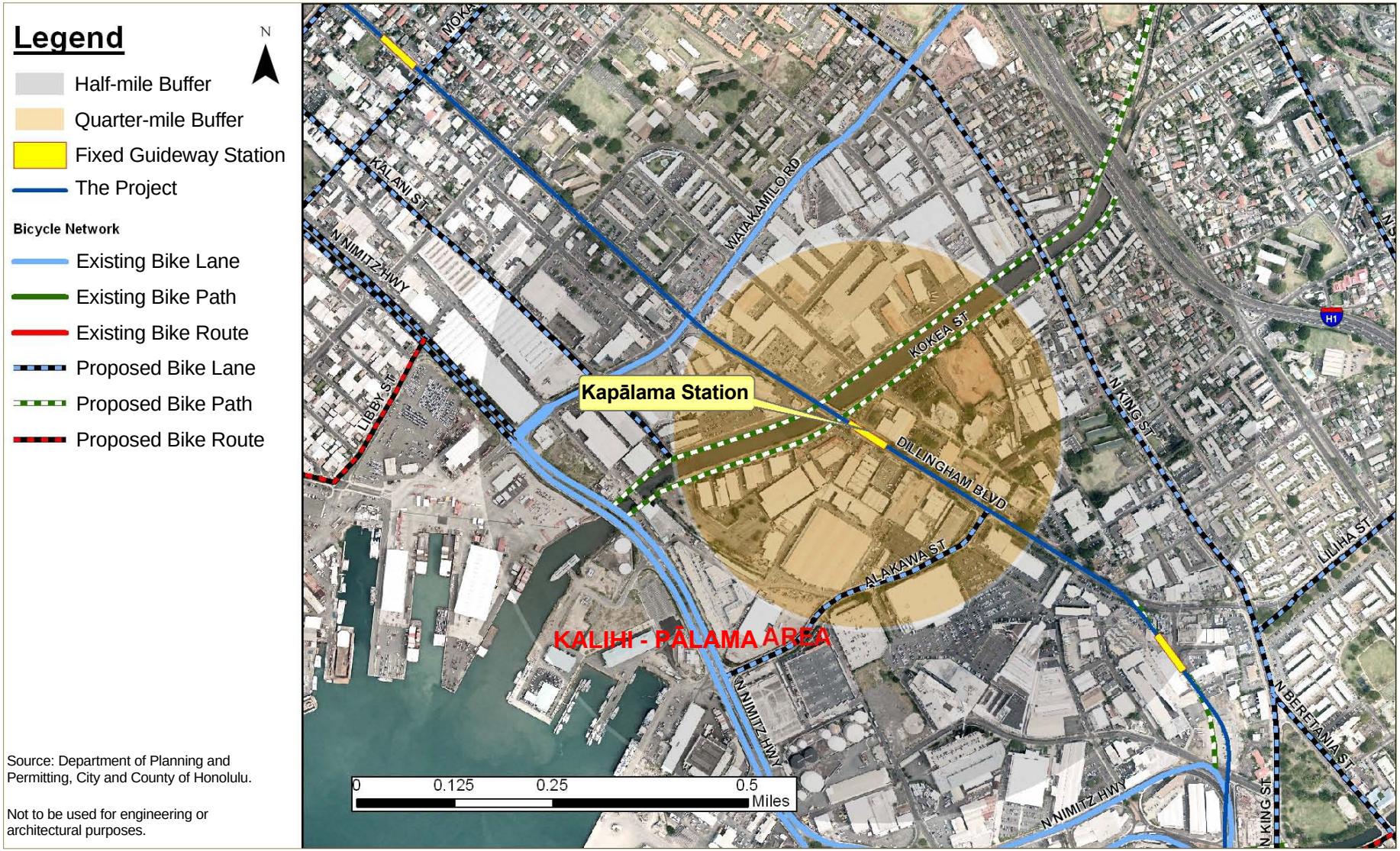
Source: Department of Planning and Permitting, City and County of Honolulu (existing land use field verified by Parsons Brinckerhoff).

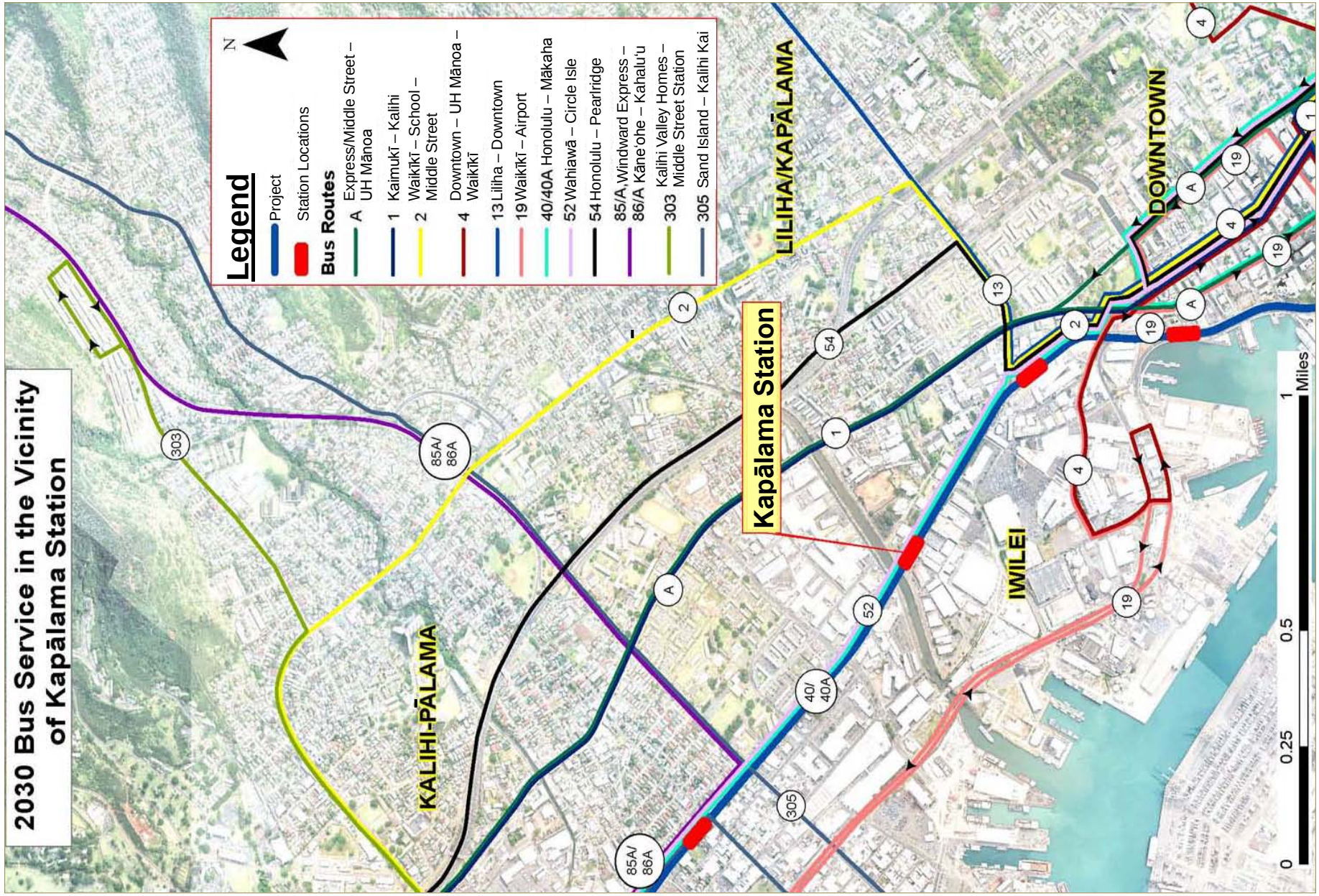
Kapālama Station—Existing Zoning



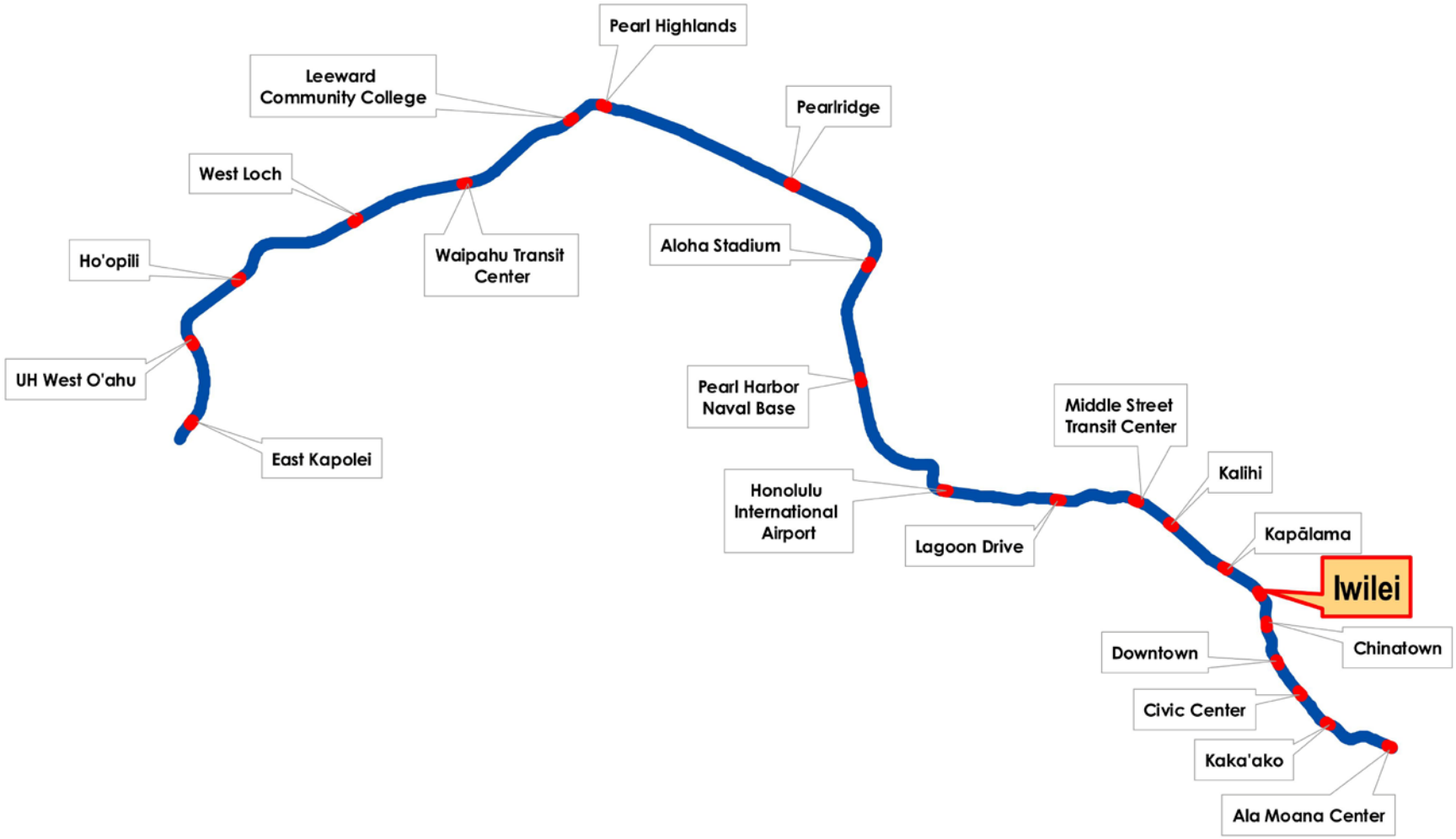
Kapālama Station—Pedestrian Access




Legend
N
Half-mile Buffer
Quarter-mile Buffer
Fixed Guideway Station
The Project
Bicycle Network
Existing Bike Lane
Existing Bike Path
Existing Bike Route
Proposed Bike Lane
Proposed Bike Path
Proposed Bike Route
Source: Department of Planning and Permitting, City and County of Honolulu.
Not to be used for engineering or architectural purposes.
Kapālama Station
KALIHI - PĀLAMA AREA
KĀLANI ST
N NIMITZ HWY
MAIAKAMILO RD
KOKEA ST
LIBBY ST
DILLINGHAM BLVD
ALAKAWA ST
N KING ST
LILIHA ST
N BERETANIA ST
H1
0
0.125
0.25
0.5
Miles


2030 Bus Service in the Vicinity of Kapālama Station
Legend
Project
Station Locations
Bus Routes
A Express/Middle Street – UH Mānoa
1 Kaimukī – Kalihi
2 Waikīkī – School – Middle Street
4 Downtown – UH Mānoa – Waikīkī
13 Liliha – Downtown
19 Waikīkī – Airport
40/40A Honolulu – Mākaha
52 Wahiawā – Circle Isle
54 Honolulu – Pearlridge
85/A,Windward Express – 86/A Kāneʻohe – Kahaluʻu
303 Kalihi Valley Homes – Middle Street Station
305 Sand Island – Kalihi Kai
N
KALIHI-PĀLAMA
LILIHA/KAPĀLAMA
Kapālama Station
IWILEI
DOWNTOWN
0
0.25
0.5
1
Miles

Iwilei Station (IL)



Summary

The Iwilei Station will be located on Dillingham Boulevard at Ka‘aahi Street. The station entrance will be designed to allow direct access to both boarding platforms without the need for a concourse. The station is located in an urban area containing a mix of commercial, industrial, and residential uses.

Site Considerations and Access

Station location and nearby land uses

- Maps showing station area land use and zoning are included in this report.
- The station will be located in an urban area on a busy street approaching Downtown Honolulu.
- The mix of land uses plus planned senior and low-income housing will provide transit-supportive activities.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown in the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- Dillingham Boulevard is a busy, heavily travelled street. Pedestrian access to the station will take place from Dillingham Boulevard and Ka‘aahi Street.
- Ka‘aahi Street will be extended through to Iwilei Road and will be designed to be pedestrian- and bicycle-friendly.
- A map showing bus access in the station area is included in this report (see Transit Access Map).
- Transfers to/from buses will take place at existing and new on-street stops located on Dillingham Boulevard and Ka‘aahi Street (see Station Area Site Plan).
- TheHandi-Van loading area will be located in a new small parking lot on Ka‘aahi Street (see Station Area Site Plan).

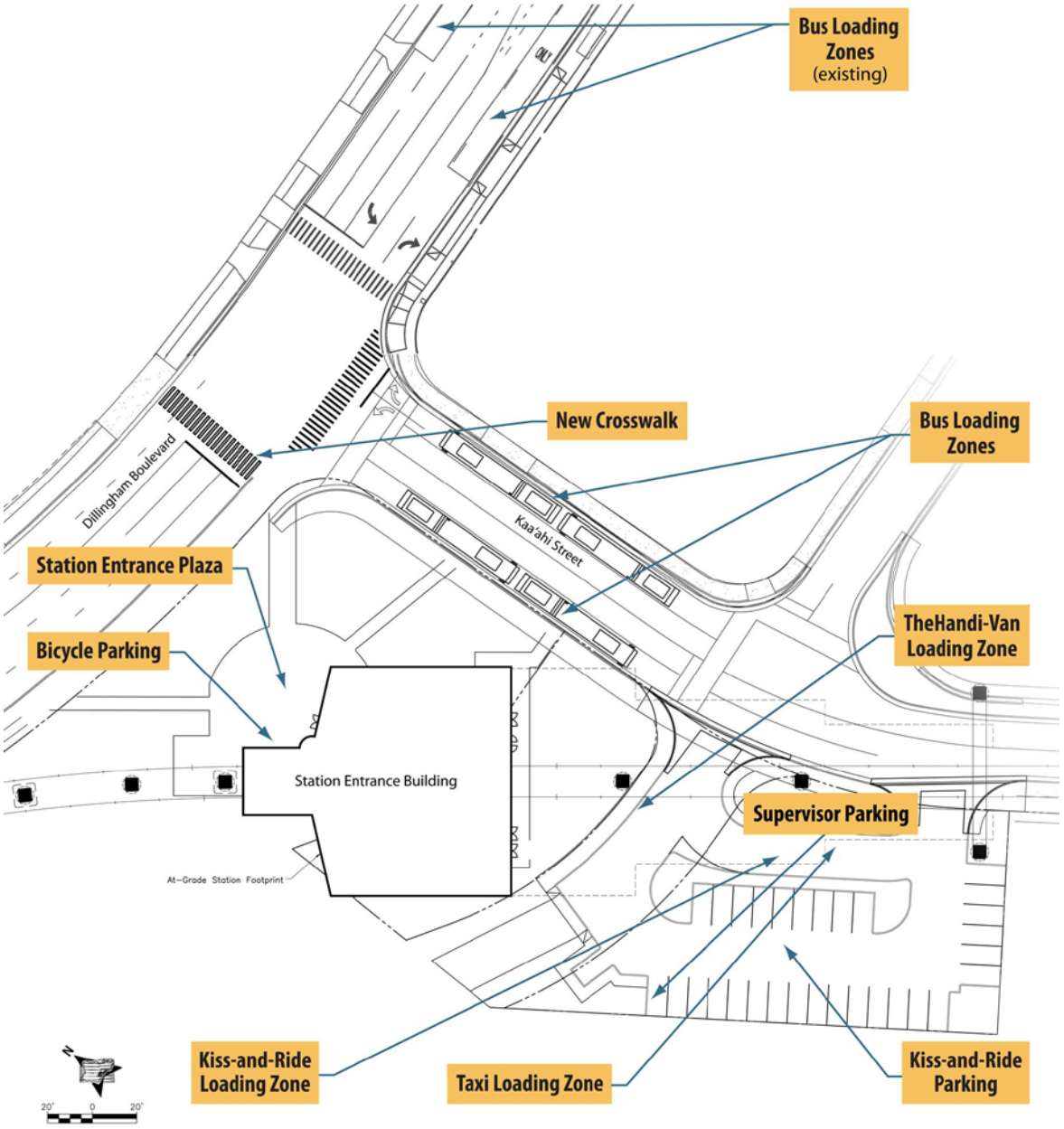
Kiss-and-ride and taxi

- Short-term parking and active loading zones for kiss-and-ride patrons and taxis will be incorporated into a small parking lot adjacent to the entrance.

Park-and-ride

- A park-and-ride facility will not be provided at this station.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Iwilei station will have a medium level of usage with a high projected share of bus transfers and kiss-and-ride trips. The station will have **Side Platforms** accessible from a single entrance below the guideway. Passengers will be able to access either platform directly from the entrance area with no need for a concourse.

TheBus will be the dominant access mode. This demand will be accommodated at existing bus stops on Dillingham Boulevard and new stops on Ka'aahi Street. One stop for **TheHandi-Van** service will be located off-street.

To accommodate **Pedestrian/Bicycle** access, some improvements to existing sidewalks will be important as well as calming of traffic, particularly along Dillingham Boulevard. Twenty bike racks should be provided at the station entrance. Also, space should be preserved for future demand and more racks or lockers should be added as needed.

Demand involving **Kiss-and-Ride** will be relatively high at this station. Twenty parking stalls and two loading/unloading spaces will be provided for kiss-and-ride users at an off-street lot located Koko Head of the station.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions		**Other Vehicle Parking**	
45' Bus Loading Zone	0	Park-and-ride	0
60' Bus Loading Zone	0	Kiss-and-ride	20
Layover	0	Kiss-and-ride loading/unloading	2
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	1
Eastbound	2	Tour bus/private shuttle	0
Westbound	2	Supervisor	1
Northbound	1	Bicycle parking (opening/2030)	20/30
Southbound	1		

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	400
Alightings	400

Access Mode Daily Trips	
Walk/bike	720
Bus	2,010
Park-and-ride	0
Kiss-and-ride	520
Other	120
Total	3,370

Station Site Design Issues and Follow-up

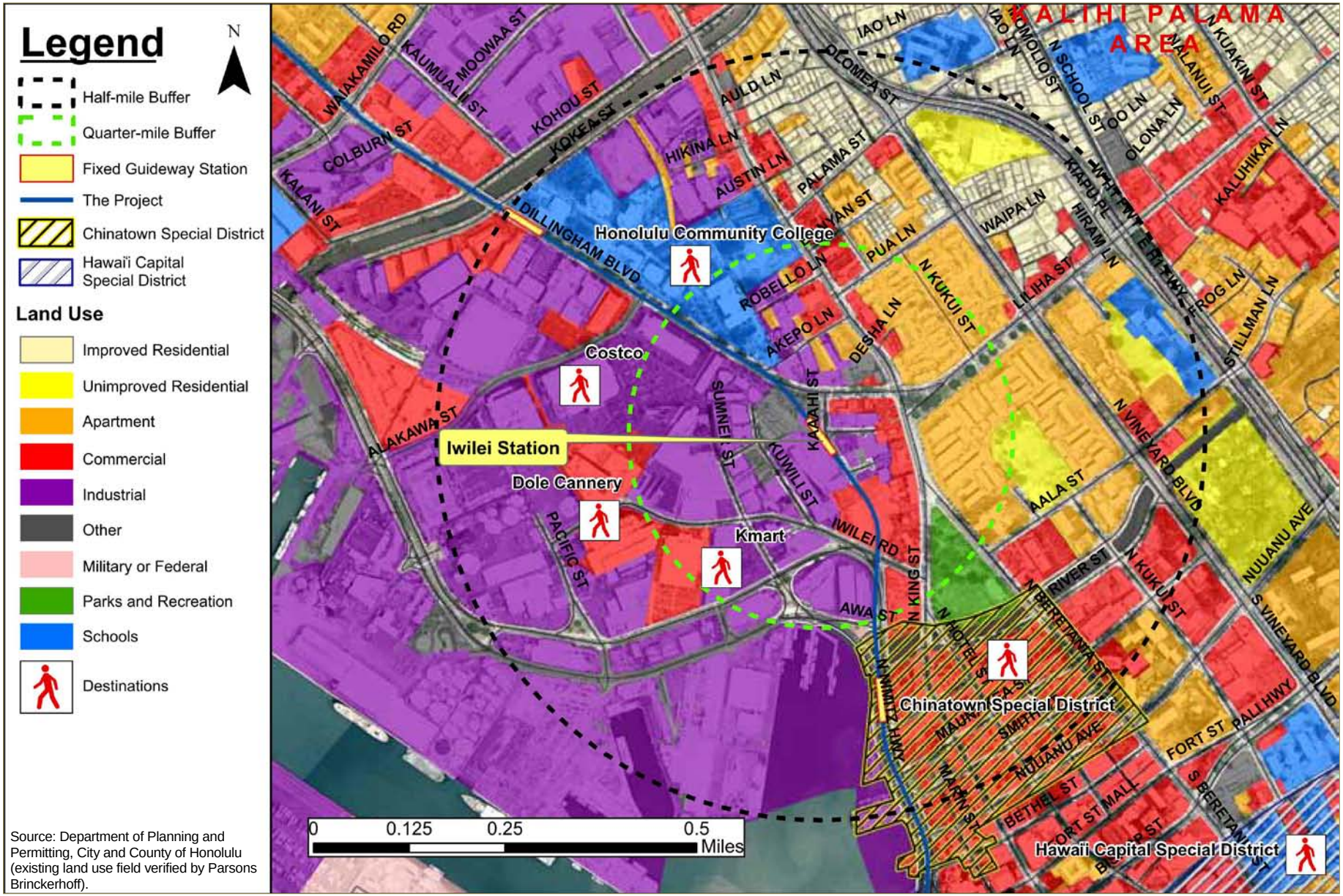
Create comfortable station entrance plazas

With the vast majority of riders arriving/departing Iwilei by bus, foot, or bicycle, it will be important for the station to have large pedestrian plazas that provide a safe and comfortable transition between on-street bus stops, the existing bike/ped network, the kiss-and-ride area, and the station entrance. The station entrance plaza should be a comfortable pedestrian environment that provides visible and secure spaces for bicycle parking and efficient, easily accessible connections between the station entrance, buses, and nearby developments.

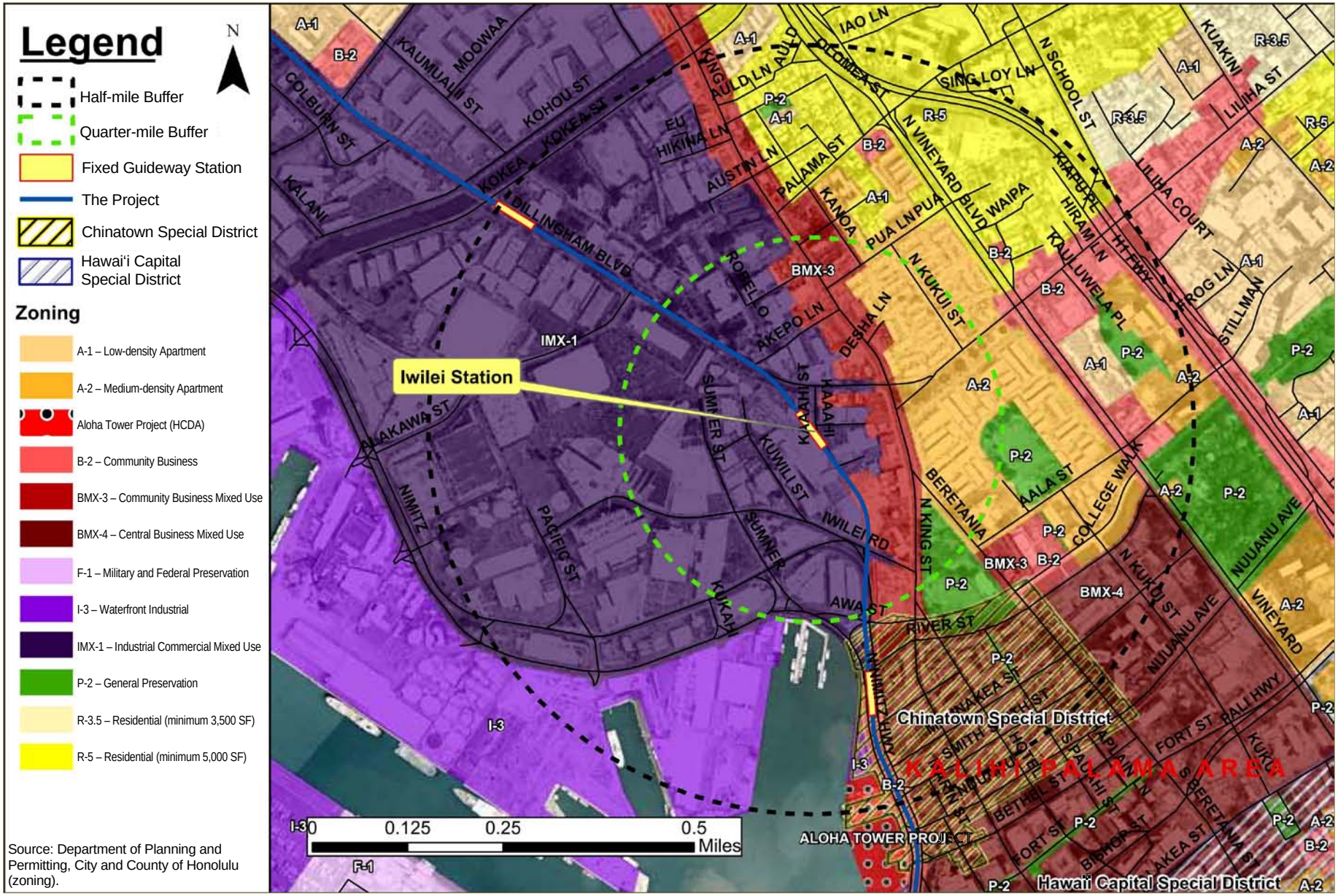
Provide clear connections between station elements

Safe and convenient pedestrian connections between various station elements will be needed, with a clear line of sight between the station entrance and other elements, such as bus stops, sidewalks, and the off-street kiss-and-ride and taxi area.

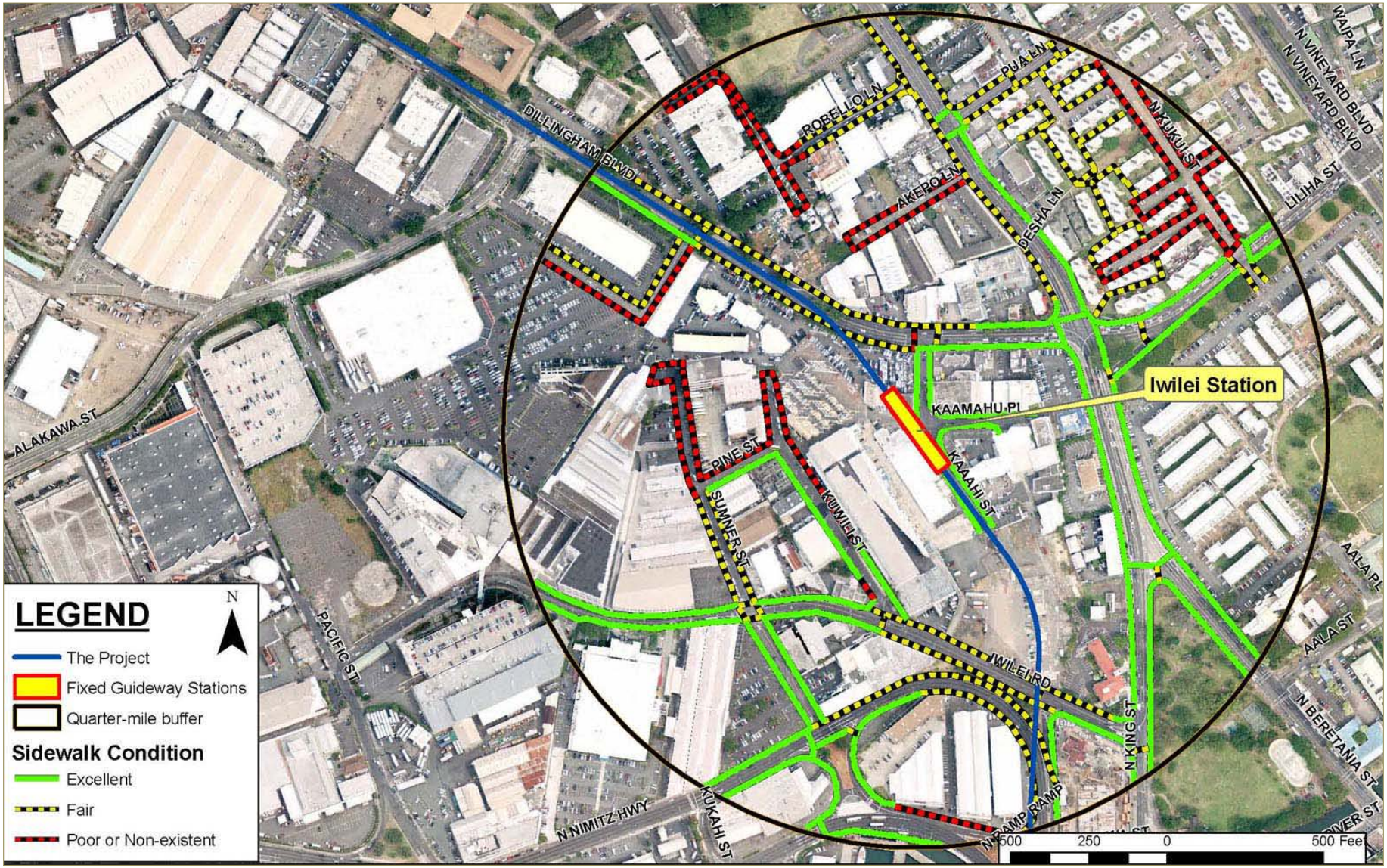
Iwilei Station—Existing Land Use



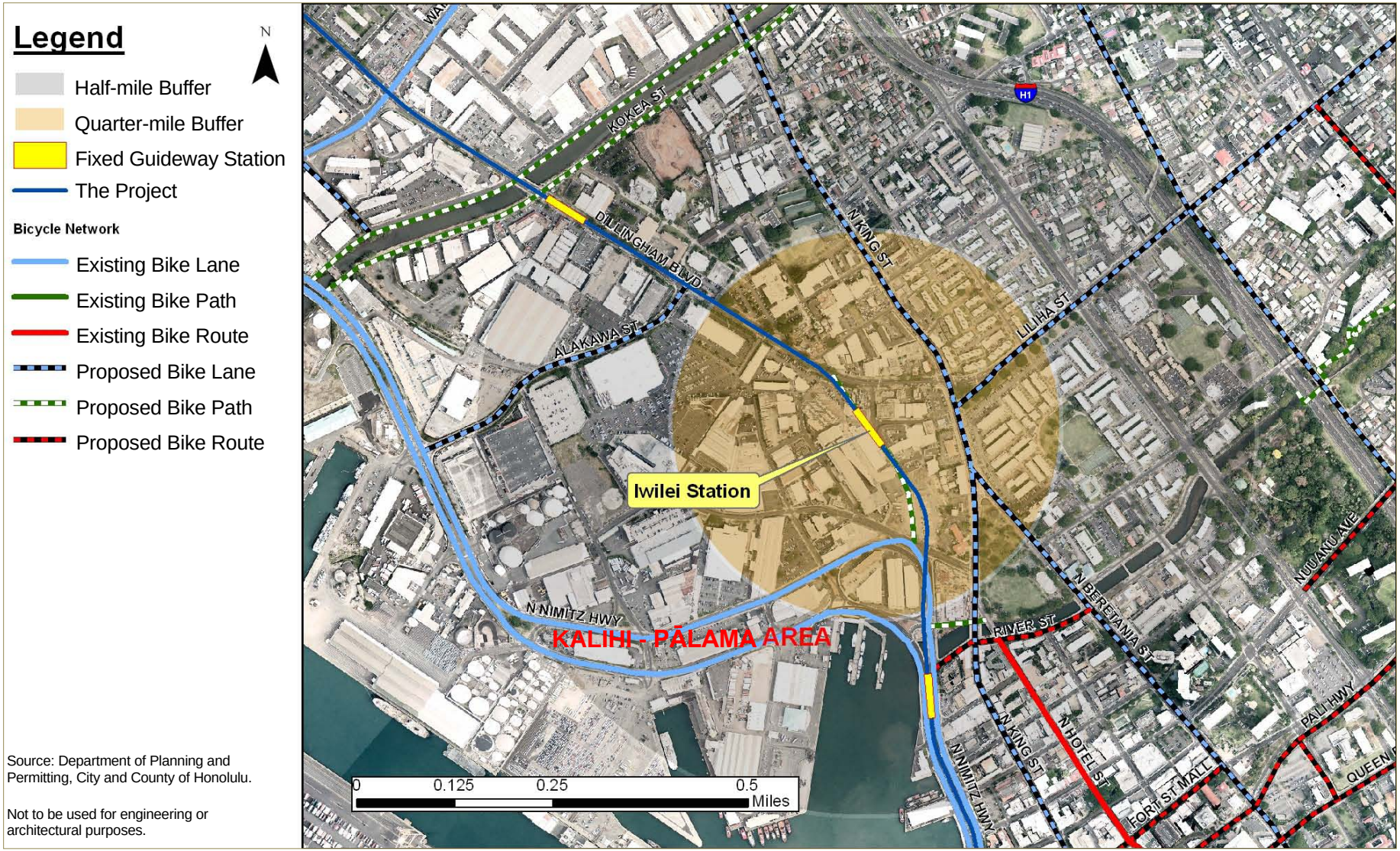
Iwilei Station—Existing Zoning

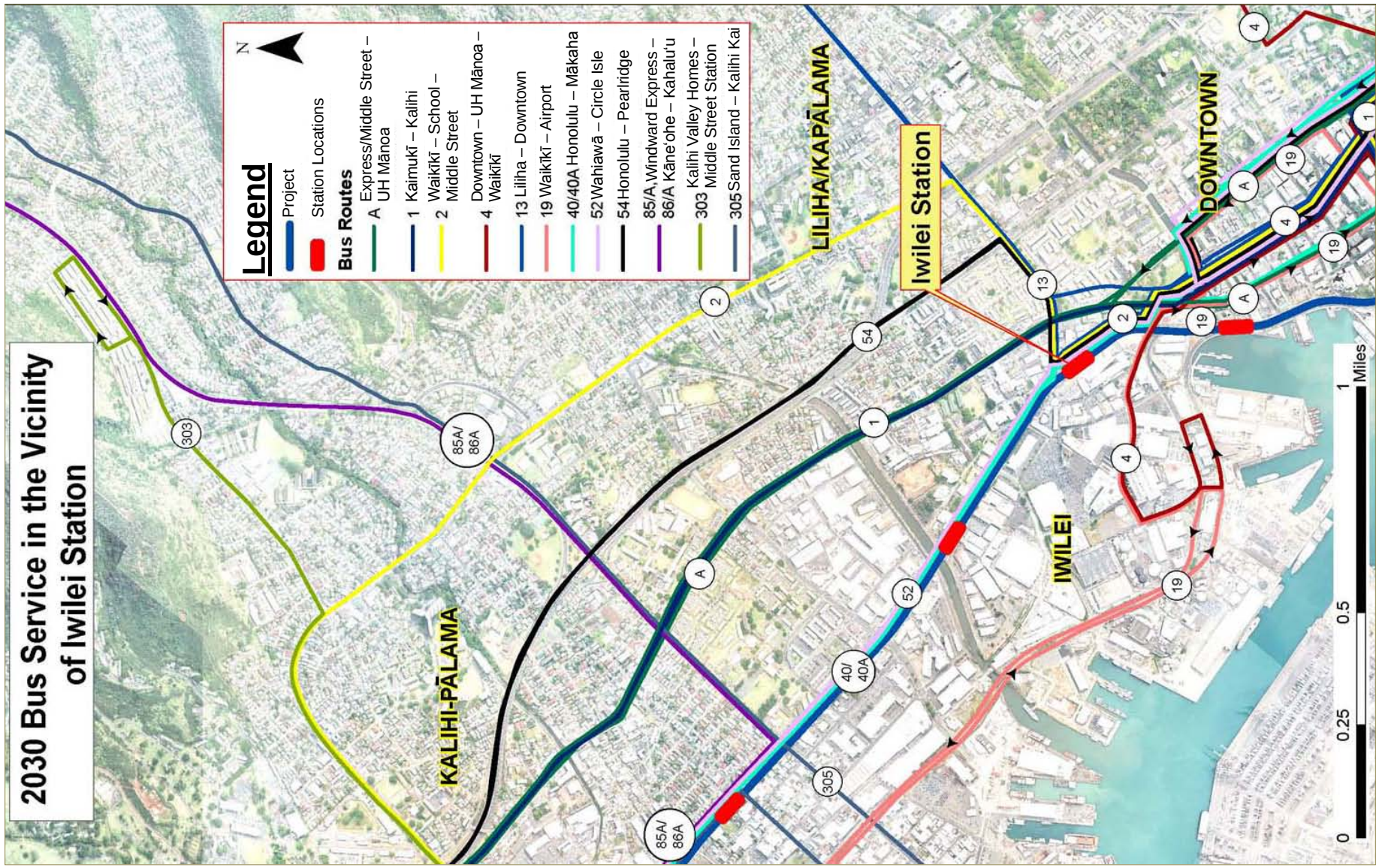


Iwilei Station—Pedestrian Access

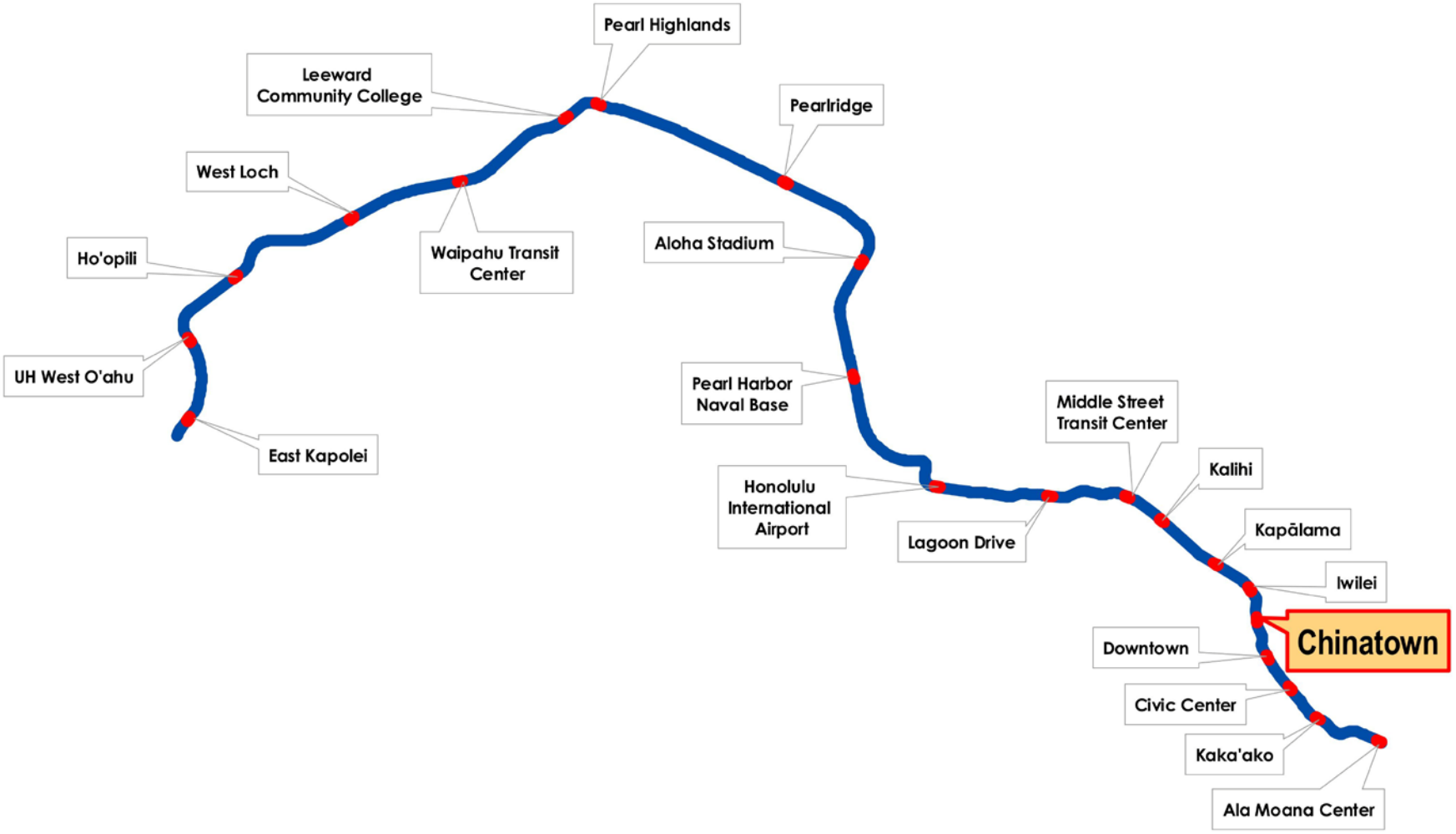


Iwilei Station—Bicycle Access




2030 Bus Service in the Vicinity of Iwilei Station
Legend
Project
Station Locations
Bus Routes
A Express/Middle Street – UH Mānoa
1 Kaimukī – Kalihi
2 Waikīkī – School – Middle Street
4 Downtown – UH Mānoa – Waikīkī
13 Liliha – Downtown
19 Waikīkī – Airport
40/40A Honolulu – Mākaha
52 Wahiawā – Circle Isle
54 Honolulu – Pearlridge
85/A, 86/A Windward Express – Kāne'ohe – Kahalu'u
303 Kalihi Valley Homes – Middle Street Station
305 Sand Island – Kalihi Kai
N
KALIHI-PĀLAMA
LILIHA/KAPĀLAMA
IWILEI
DOWNTOWN
Iwilei Station
0
0.25
0.5
1
Miles

Chinatown Station (CH)



Summary

The Chinatown Station will be located on Nimitz Highway between River and Kekaulike Streets. A single station entrance will be located on the mauka side of Nimitz Highway. Most of the station ridership will involve demand by pedestrians and bicyclists coming from mauka of the station.

Site Considerations and Access

Station location and nearby land uses

- Maps showing station area land use and zoning are included in this report.
- The station will be located in a dense urban area on the edge of Downtown Honolulu, characterized by a mix of land uses, including high-density housing, commercial, and retail.
- Nearby retail activities include the O'ahu food market, which is visited by locals and tourists.
- Chinatown is a historic district with design controls managed by the City.
- Additional high-density residential and commercial uses are located Koko Head of the station.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown on the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- Walking and bicycling will be the dominant mode of access to the rail station.
- The area already has substantial pedestrian activity by residents and tourists.
- Streets and sidewalks are narrow and crowded, making access difficult for pedestrians and bicyclists.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report (see Transit Access Map).
- Bus stops for fixed-route service will not be located at the station.
- Bus service is available nearby using existing bus stops on Hotel, King, and River Streets.
- TheHandi-Van loading area will be located on Kekaulike Street adjacent to the station entrance.

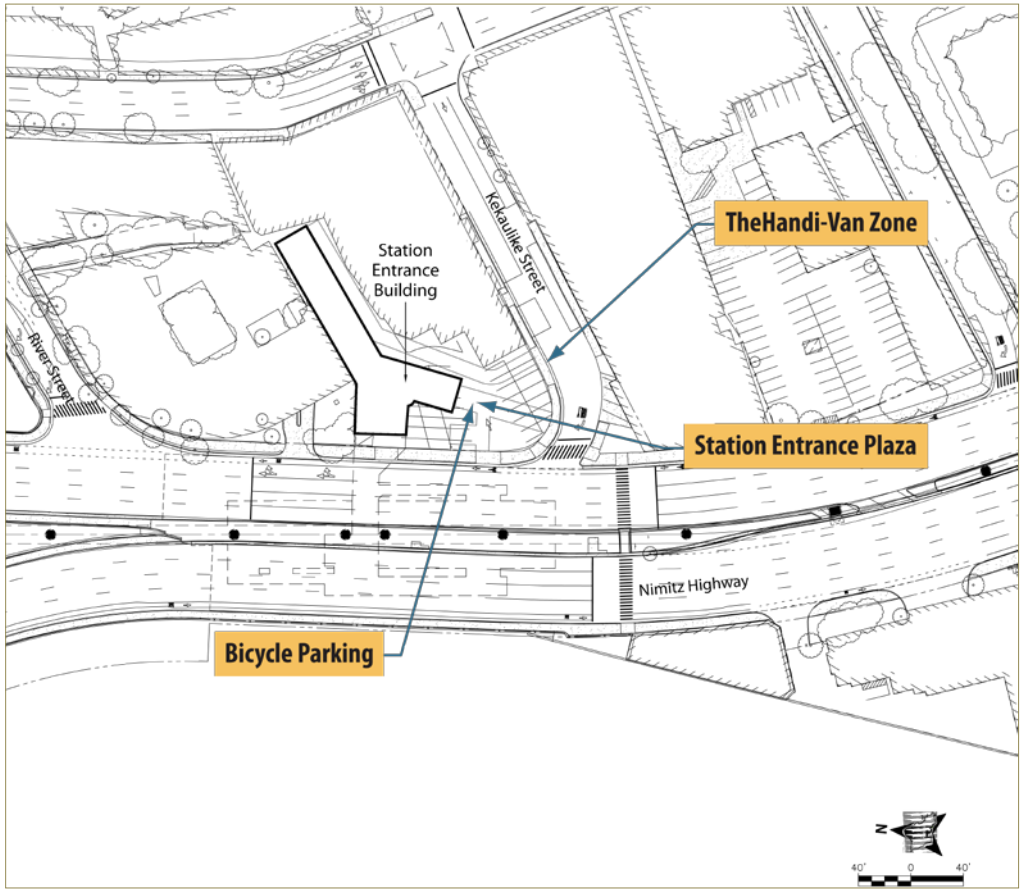
Kiss-and-ride and taxi

- Parking and loading zones for kiss-and-ride and taxis will not be provided at this station.

Park-and-ride

- A park-and-ride facility will not be provided at this station.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Chinatown station will have relatively modest ridership with a high projected share of bike/ped trips. The station will have **Side Platforms** accessible from a single entrance on the mauka side of Nimitz Highway. The platforms will be connected by an overhead concourse.

TheBus access will be a relatively small portion of total demand at this station. While there are no fixed-route bus stops at the station, they are located on King and Hotel Streets within 1/2 mile of the entrance. An on-street position for TheHandi-Van service will be provided on Kekaulike Street (‘Ewa side) near the station entrance.

To accommodate **Pedestrian/Bicycle** access, some improvements to existing sidewalks will be important. Bicycle parking, in the form of bike racks, should be provided at the station entrance. Also, space should be preserved for future demand and more racks or lockers should be added as needed.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions		**Other Vehicle Parking**	
45’ Bus Loading Zone	0	Park-and-ride	0
60’ Bus Loading Zone	0	Kiss-and-ride	0
Layover	0	Kiss-and-ride loading/unloading	0
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	0
Eastbound	0	Tour bus/private shuttle	0
Westbound	0	Supervisor	0
Northbound	0	Bicycle parking (opening/2030)	20/20
Southbound	0		

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	90
Alightings	250

Access Mode Daily Trips	
Walk/bike	1,250
Bus	300
Park-and-ride	0
Kiss-and-ride	10
Other	0
Total	1,560

Station Site Design Issues and Follow-up

Create comfortable station entrance and bus waiting areas

Given the dominance of walk and bike access, it will be important for the station to have a large pedestrian plaza that provides a safe and comfortable transition between sidewalks on Nimitz Highway and Kekaulike Street and the station entrance. The station entrance plaza should be a comfortable pedestrian environment and provide a visible secure space for bicycle parking and efficient, easily accessible connections between the station entrance, sidewalks, and nearby developments, including high-density commercial and residential uses and tourist activities.

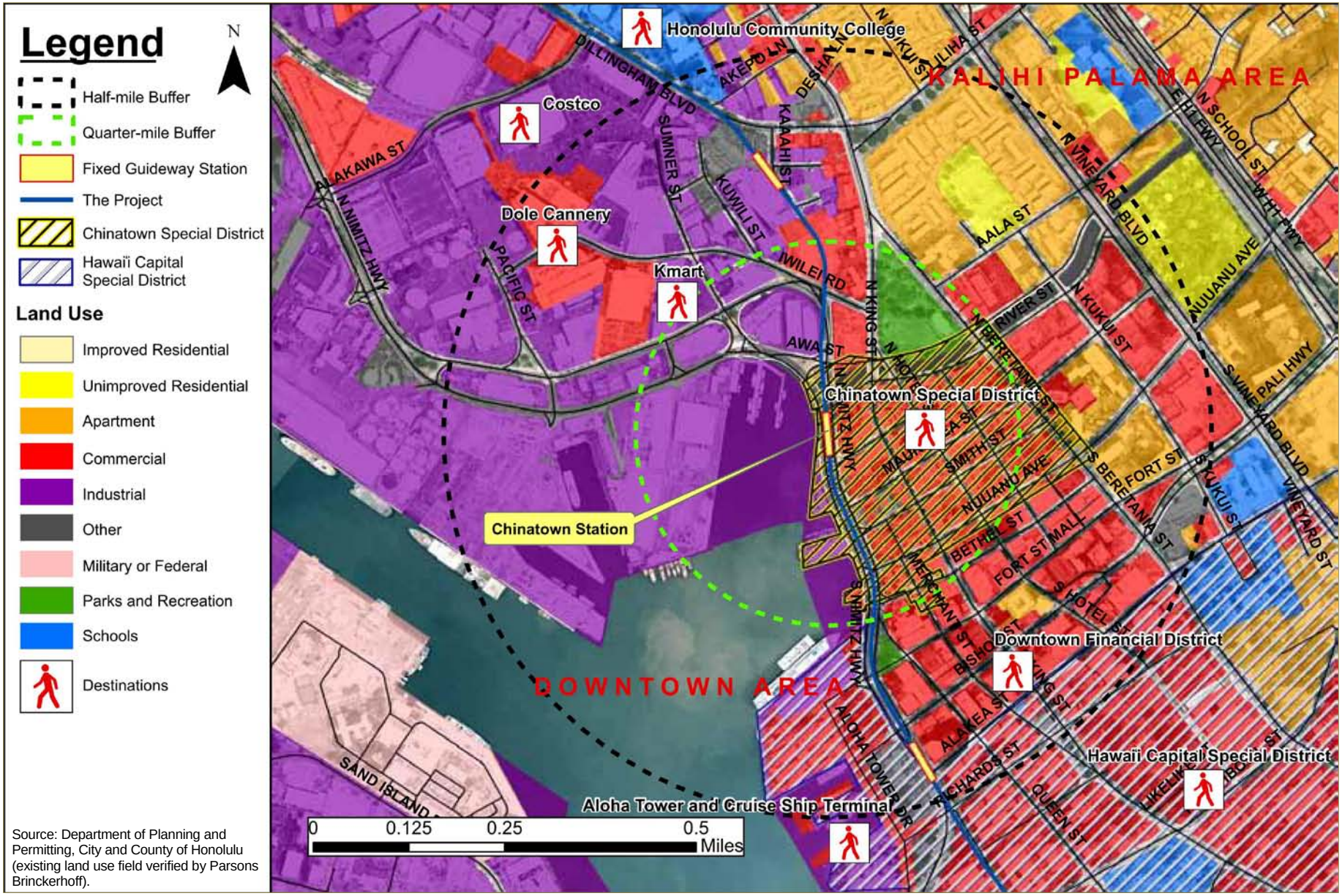
Provide clear connections between station elements

Safe and convenient pedestrian connections between various station elements will be needed, with a clear line of sight between the station entrance and other elements, such as sidewalks.

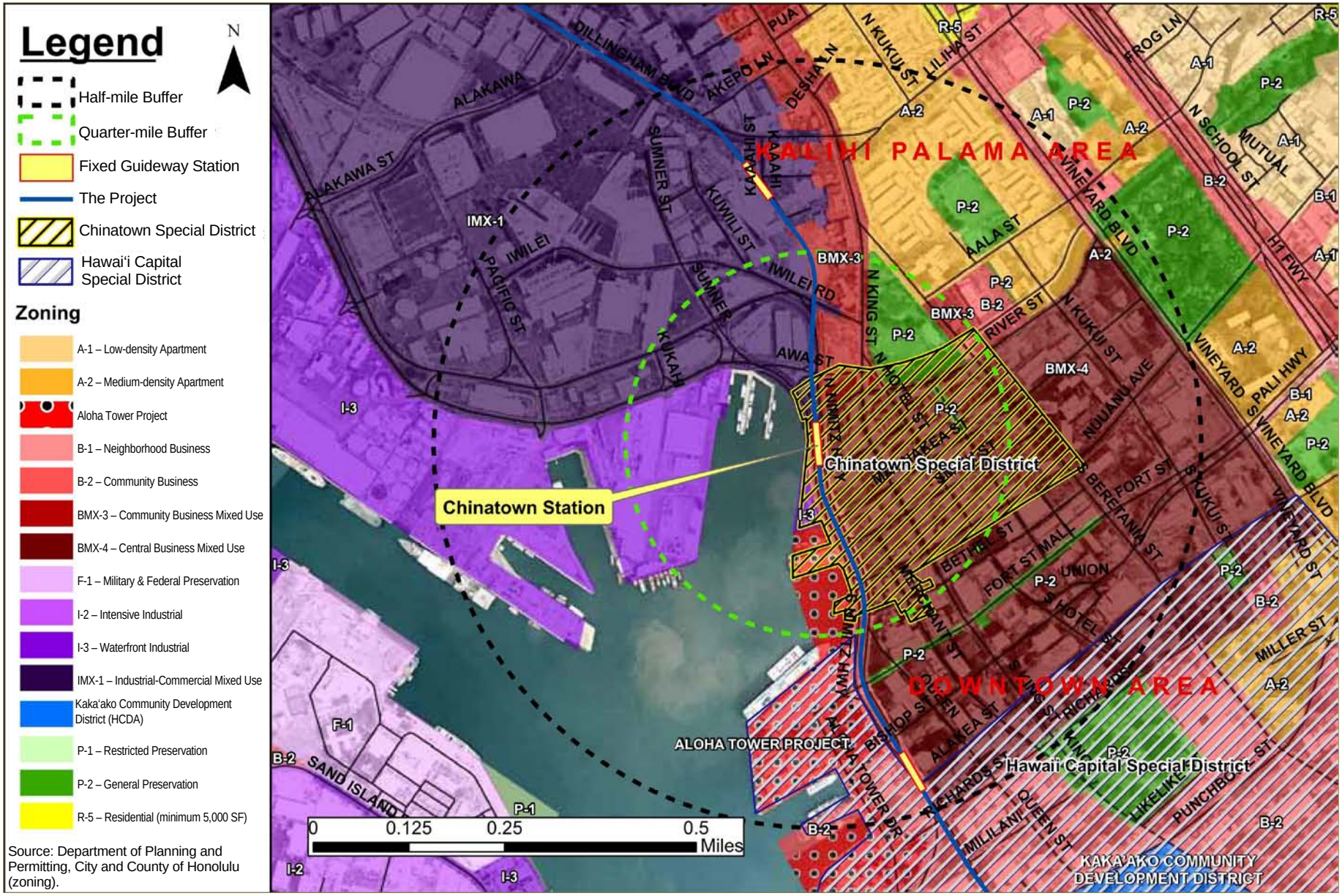
Specific Environmental Station Site Design Criteria

Controls to protect and enhance important historic and cultural resources near this station are included in a Section 106 Programmatic Agreement (PA). All stipulations in the PA must be adhered to for construction and construction-related activities.

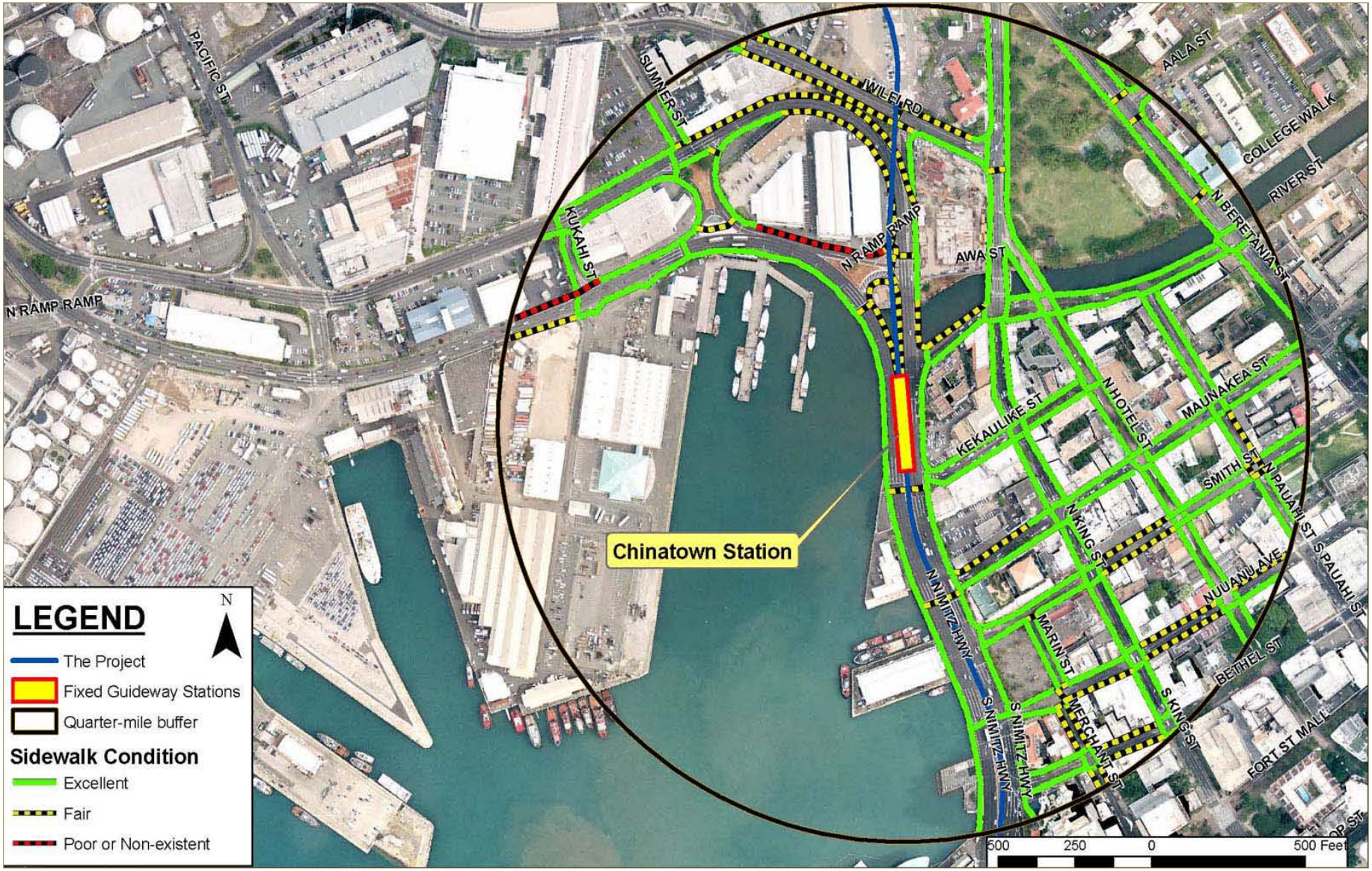
Chinatown Station—Existing Land Use



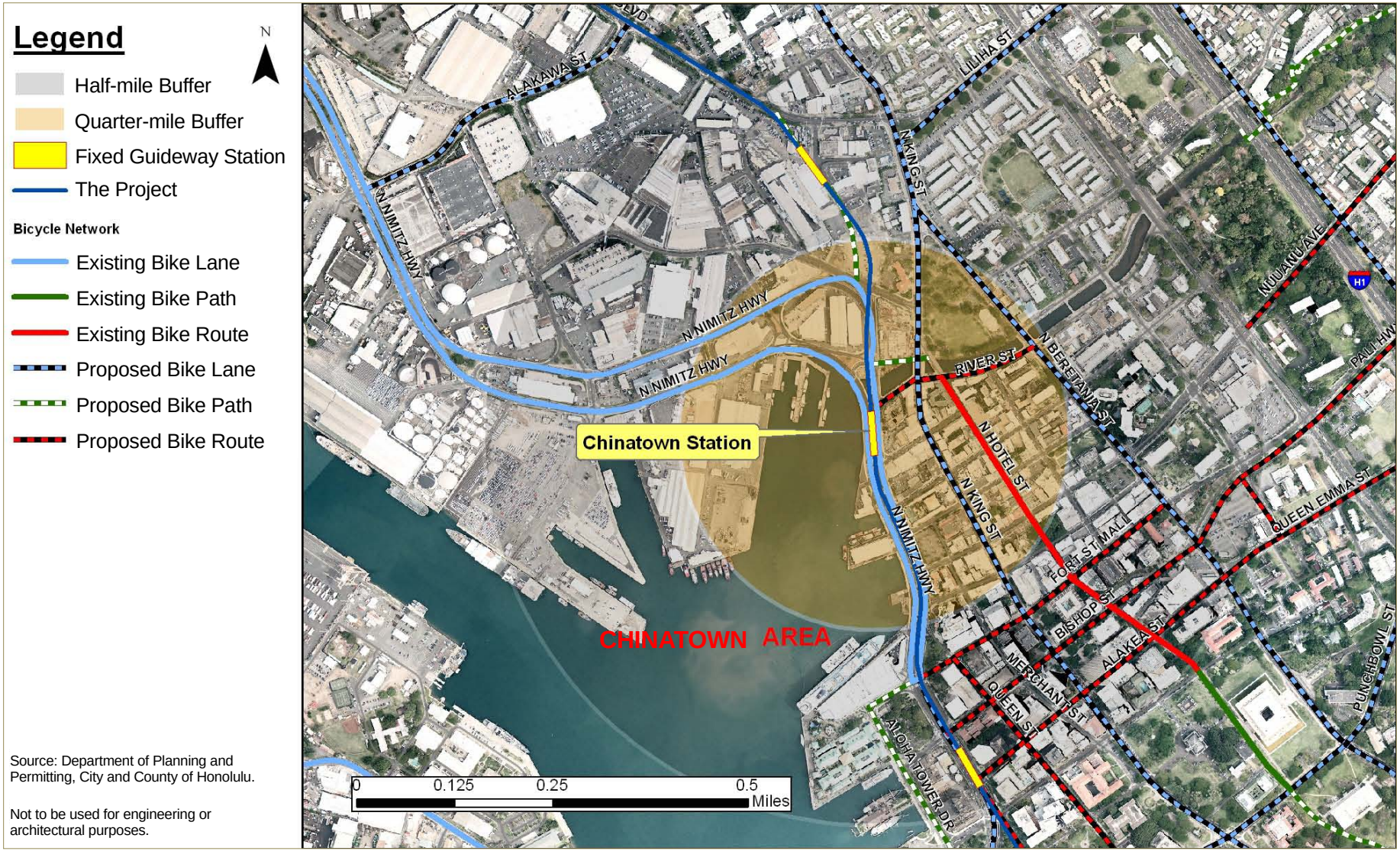
Chinatown Station—Existing Zoning

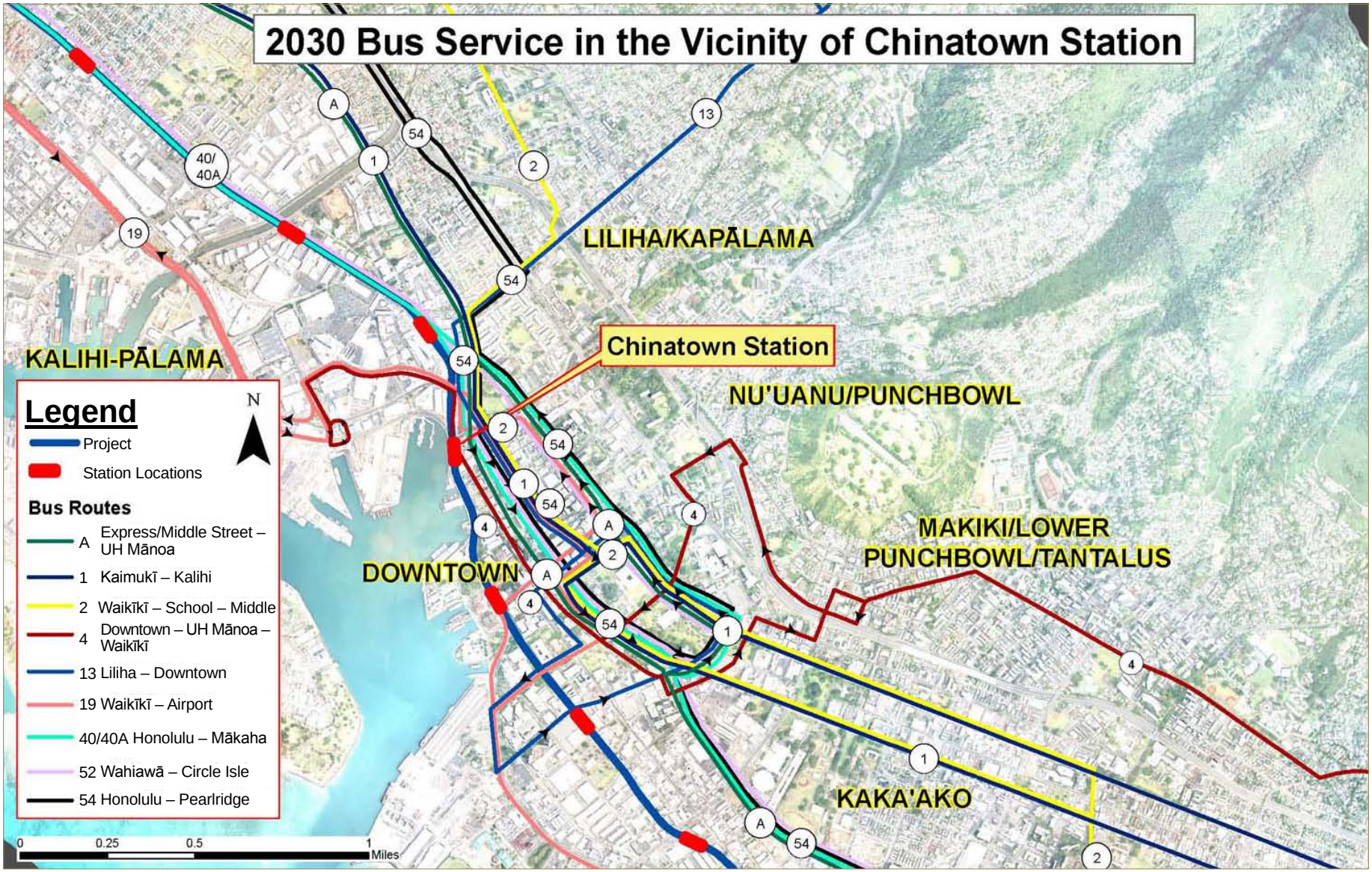


Chinatown Station—Pedestrian Access

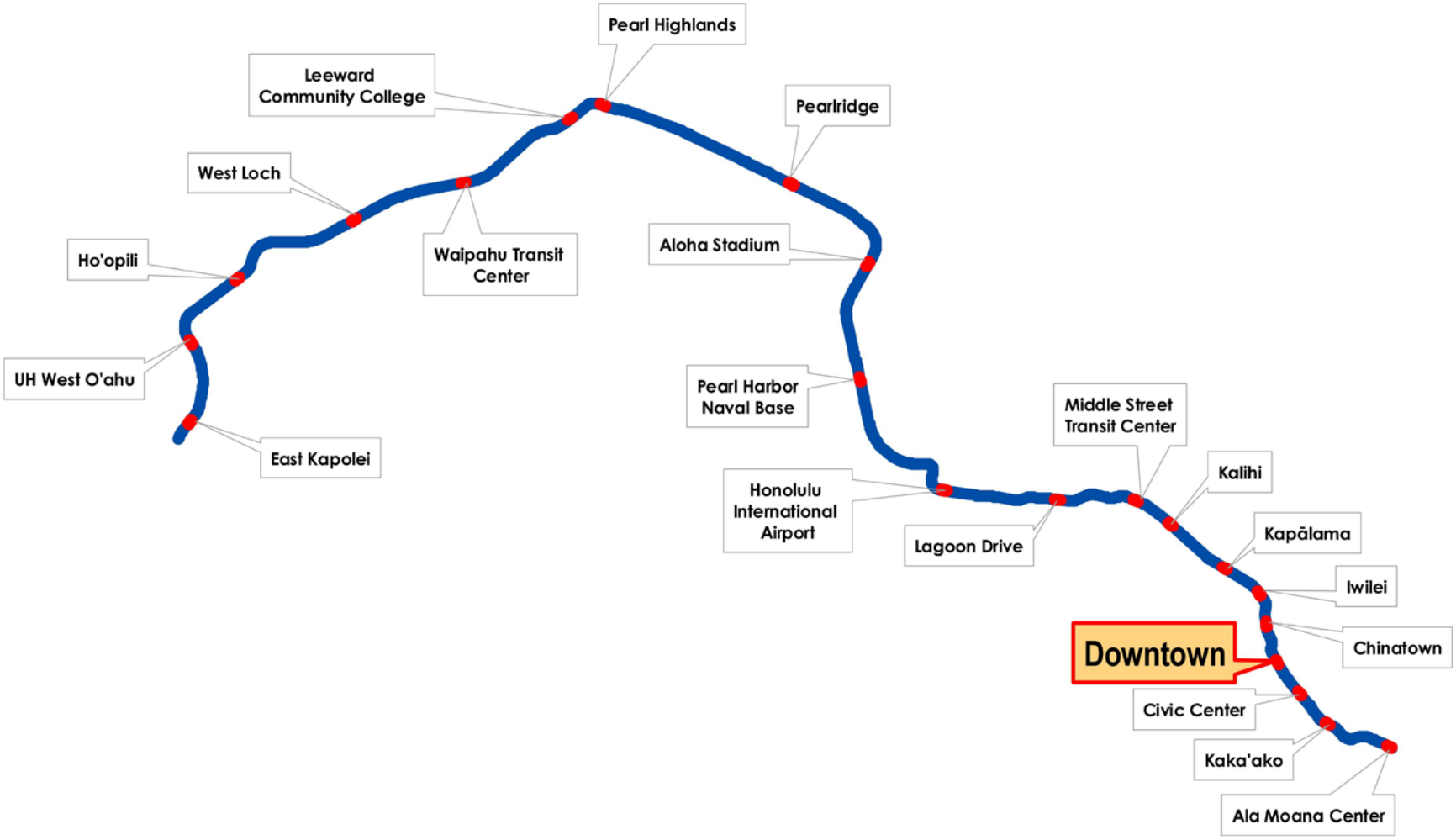


Chinatown Station—Bicycle Access




2030 Bus Service in the Vicinity of Chinatown Station
Chinatown Station
LILIHA/KAPĀLAMA
KALIHI-PĀLAMA
NU'UANU/PUNCHBOWL
DOWNTOWN
MAKIKI/LOWER PUNCHBOWL/TANTALUS
KAKA'AKO
Legend
Project
Station Locations
Bus Routes
A Express/Middle Street – UH Mānoa
1 Kaimukī – Kalihi
2 Waikīkī – School – Middle
4 Downtown – UH Mānoa – Waikīkī
13 Liliha – Downtown
19 Waikīkī – Airport
40/40A Honolulu – Mākaha
52 Wahiawā – Circle Isle
54 Honolulu – Pearlridge
N
0 0.25 0.5 1 Miles

Downtown Station (DT)



Summary

Downtown Station will be located on Nimitz Highway near Bishop Street. One of the station entrances will be located on the mauka side of Nimitz Highway, between the Dillingham Transportation Building and the Pacific Guardian Center. The makai station entrance will be located on the corner of Nimitz Highway and Bishop Street, adjacent to the Hawaiian Electric Company power plant. The entrance buildings will be connected by a pedestrian bridge spanning Nimitz Highway at the concourse level.

Site Considerations and Access

Station location and nearby land use

- Maps showing station area land use and zoning are included in this report.
- The station serves Downtown Honolulu.
- The station location is a dense urban downtown core containing a mix of high-rise office, commercial, and residential buildings.
- There is limited room for the station entrance buildings.
- Because of its location at the makai end of Downtown, most of the daily station traffic will use the mauka station entrance.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown on the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- Because of the downtown location, many patrons using this station will walk or bike to or from the station.
- Sidewalks and streetscapes near the station may need to be upgraded to serve the large number of pedestrians.
- Access to the makai station entrance will be through the pedestrian plaza behind the Pacific Guardian Center. Signage and wayfinding will be important for first-time users.

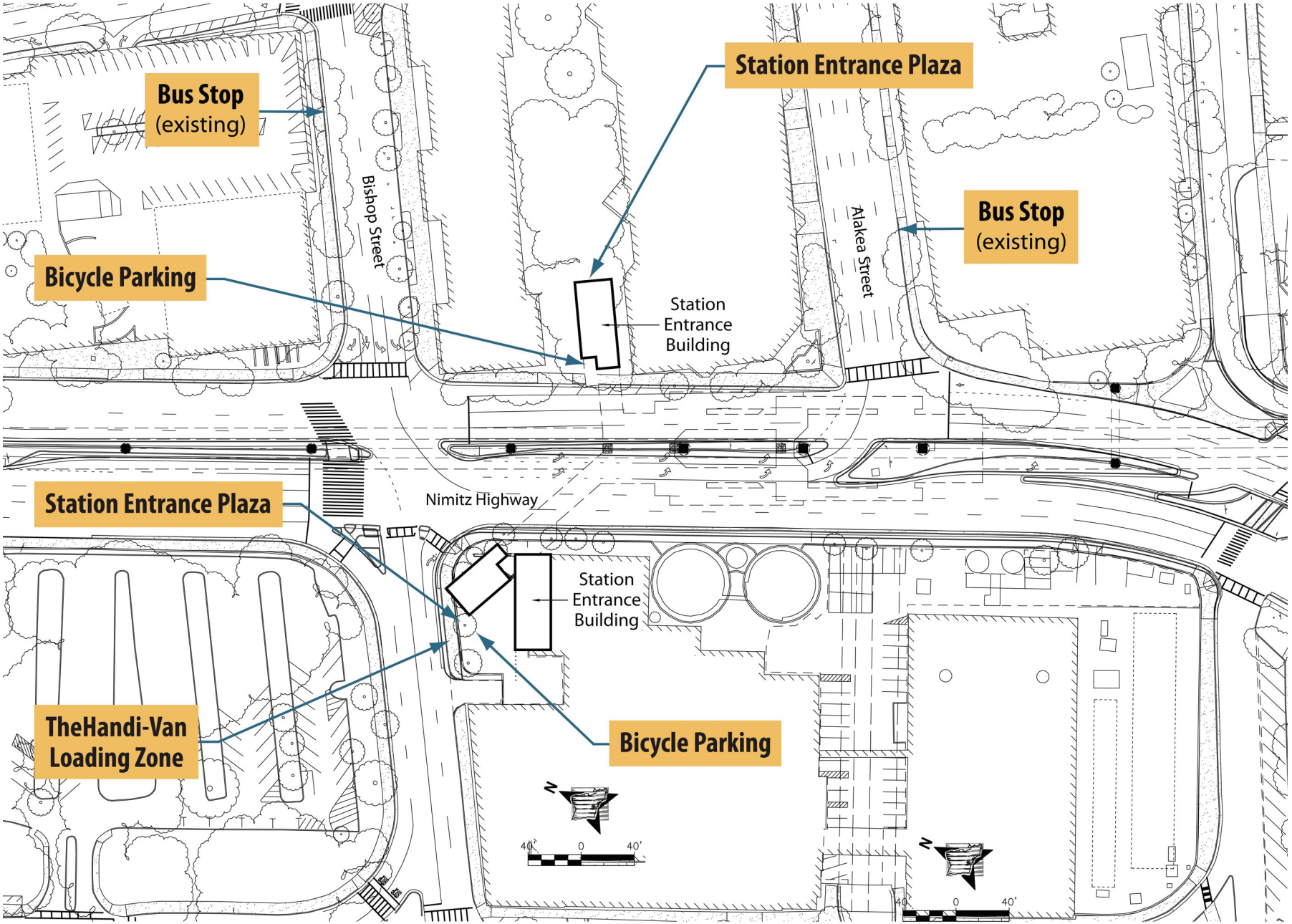
TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report. Transfers to/from buses will take place at existing bus stops on nearby streets.
- A loading area for TheHandi-Van will be located near the makai entrance on Bishop Street.

Kiss-and-ride and taxi

- No special accommodation is planned for kiss-and-ride patrons at this station.
- A taxi loading zone is located at Aloha Tower Marketplace near the makai entrance.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions		**Other Vehicle Parking**	
45' Bus Loading Zone	0	Park-and-ride	0
60' Bus Loading Zone	0	Kiss-and-ride	0
Layover	0	Kiss-and-ride loading/unloading	0
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	0
Eastbound	0	Tour bus/private shuttle	0
Westbound	0	Supervisor	0
Northbound	0	Bicycle parking (opening/2030)	20/110
Southbound	0		

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	550
Alightings	2,030

Access Mode Daily Trips	
Walk/bike	2,830
Bus	7,930
Park-and-ride	0
Kiss-and-ride	10
Other	0
Total	10,770

Downtown station will have very high usage with passengers accessing the station from all over downtown by walking/bicycling or feeder bus. The station will have **Side Platforms** accessible from two entrances—one on either side of Nimitz Highway and connected by an overhead concourse. The concourse will be open to the general public.

TheBus will be the dominant access mode. There are a variety of destinations, such as Queens Medical Center, that are beyond a convenient walking distance but will be a short bus ride from the Downtown Station. Bus transfers will take place on-street at existing bus stops on Bishop and Alakea Streets. Patrons will use existing sidewalks connecting bus stops with the mauka station entrance. A loading zone for **TheHandi-Van** vehicles will be provided on Bishop Street makai of Nimitz Highway, near the makai entrance.

Pedestrian access to the Downtown station will be very important. The primary entrance (mauka) will be in a pedestrian plaza located between Pacific Guardian Center and the Dillingham Transportation Building. This entrance will serve the lower Downtown neighborhood, providing access to major high-rise buildings and other Downtown destinations.

A minimum of 20 **Bicycle** parking racks will be provided at each station entrance and space should be dedicated for additional racks in the future to meet anticipated demand.

Taxi access will be at the existing taxi stand at the Aloha Tower Marketplace which is near the makai entrance.

Station Site Design Issues

Create identity for the mauka station entrance

The mauka station will be somewhat hidden within a plaza between two buildings. Creating a unique identity that respects the character of the plaza but also accommodates riders will be a challenge to the design of the station. The large volume of passengers using this station entrance (about 2,500 during the peak hour) will require consideration of design features to address substantial passenger flow and movement, both within the station and the plaza. In addition, this station will be designed to allow non-passengers to use the concourse level to cross Nimitz Highway. That will bring even more people into the station entrance through this plaza. Coordination with Pacific Guardian Center should also be a priority.

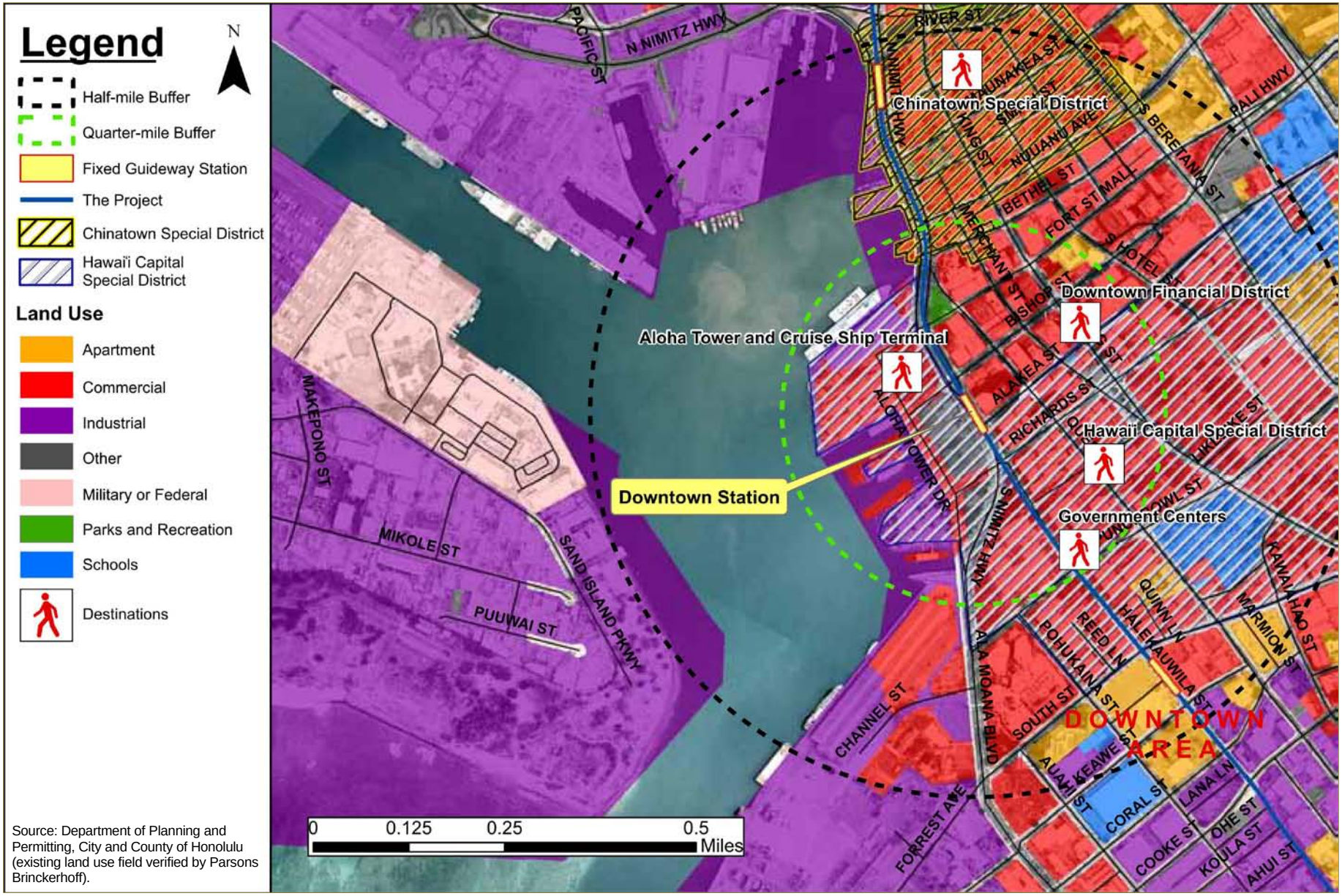
Provide clear connections between station and on-street bus stops

Many passengers will transfer between bus and train at this station. Proper signage, lighting, and improved pedestrian connections may be needed to ensure transfers are easy and safe. Bus stops may need to be enlarged or enhanced to handle the additional passengers.

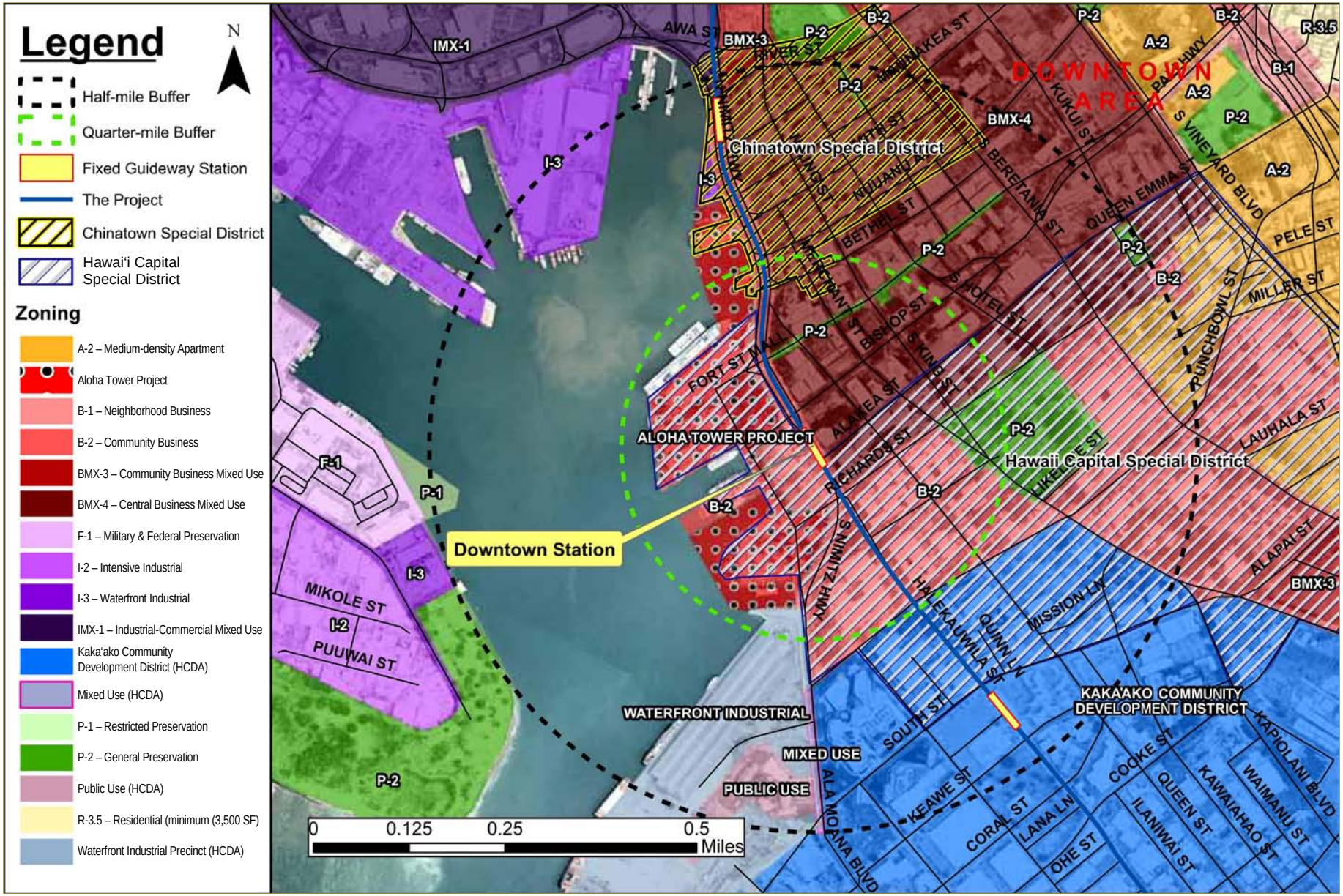
Specific Environmental Station Site Design Criteria

All stipulations in the Section 106 Programmatic Agreement must be adhered to for construction and construction-related activities.

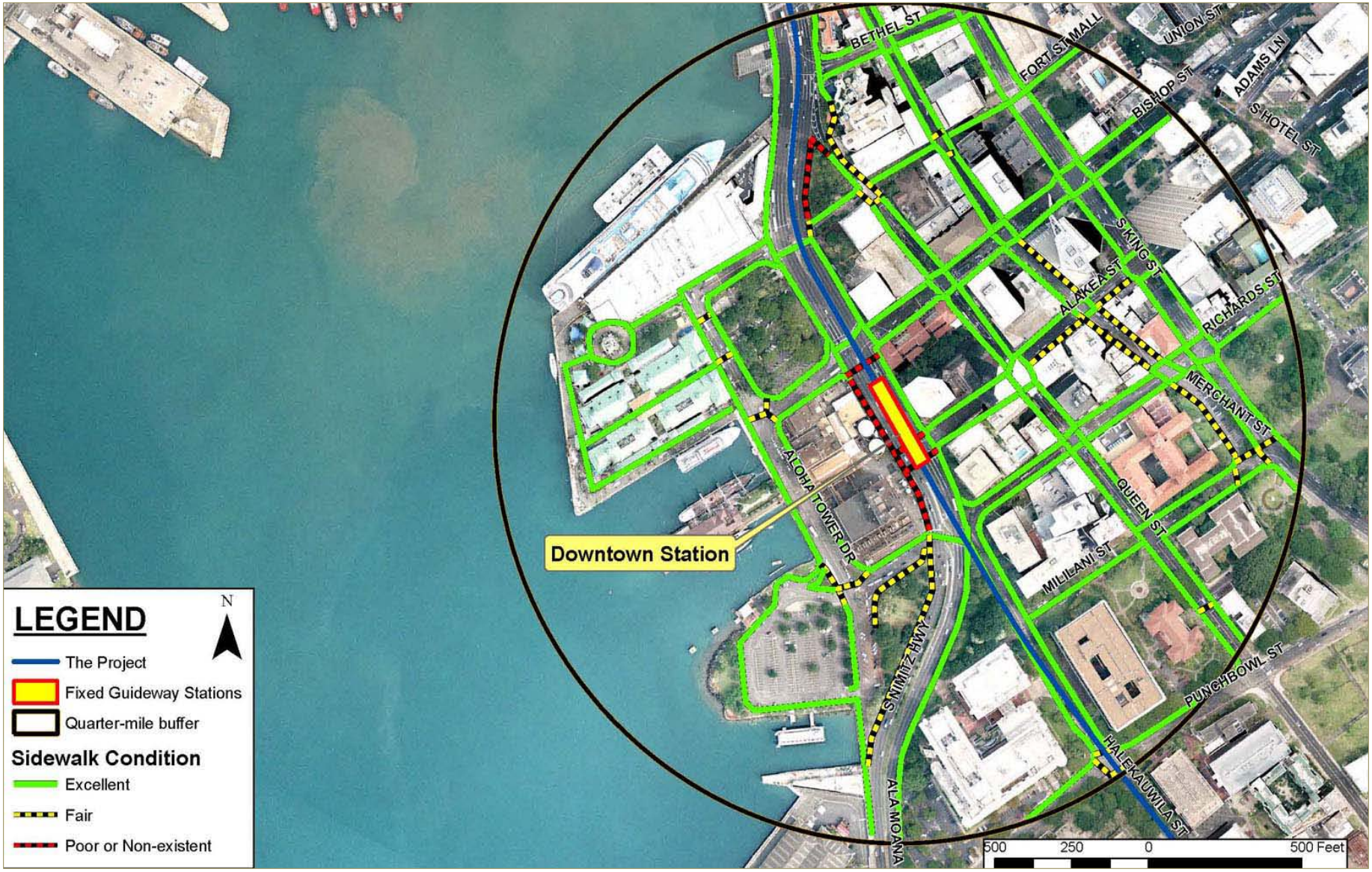
Downtown Station—Existing Land Use



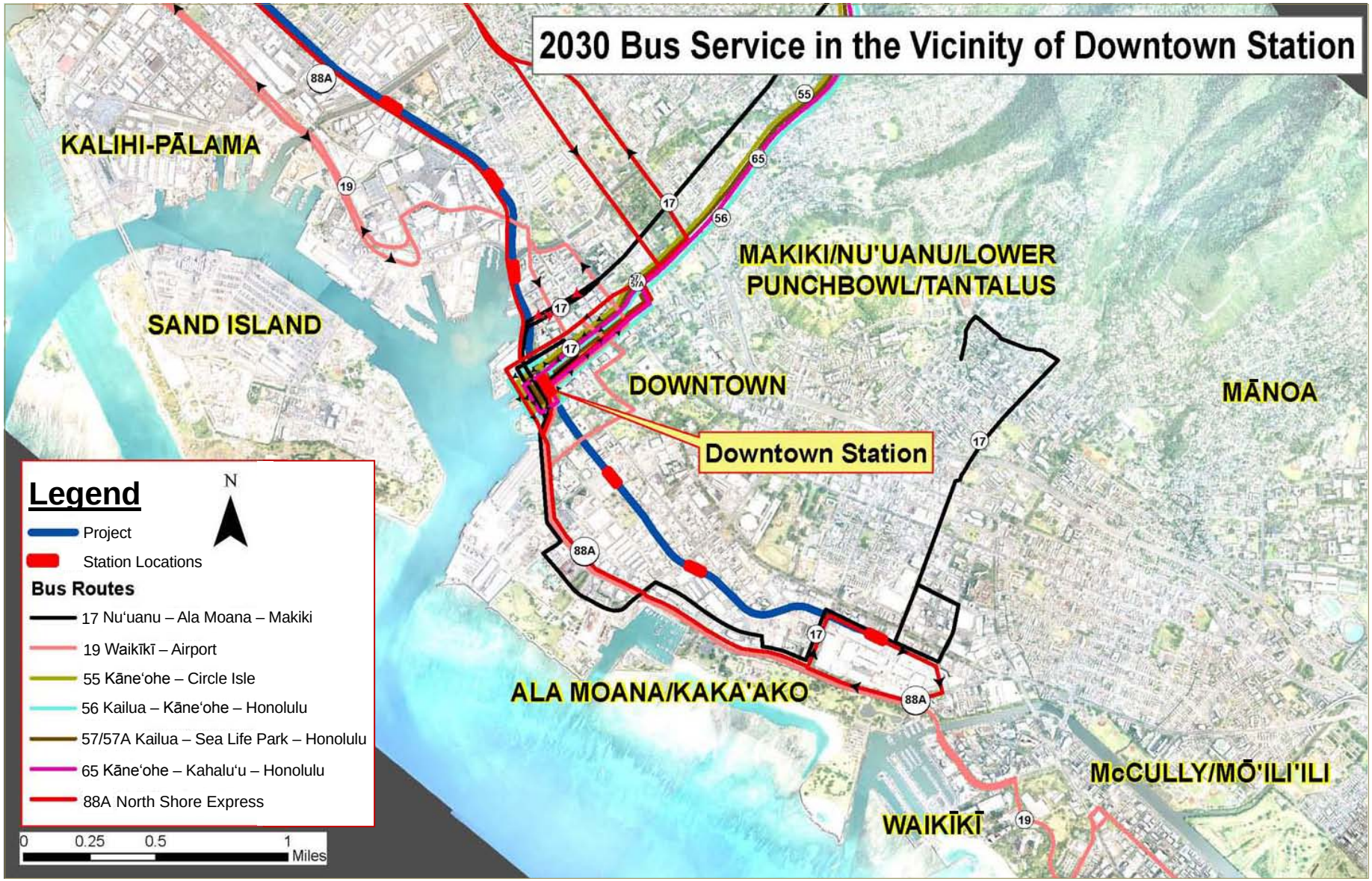
Downtown Station—Existing Zoning



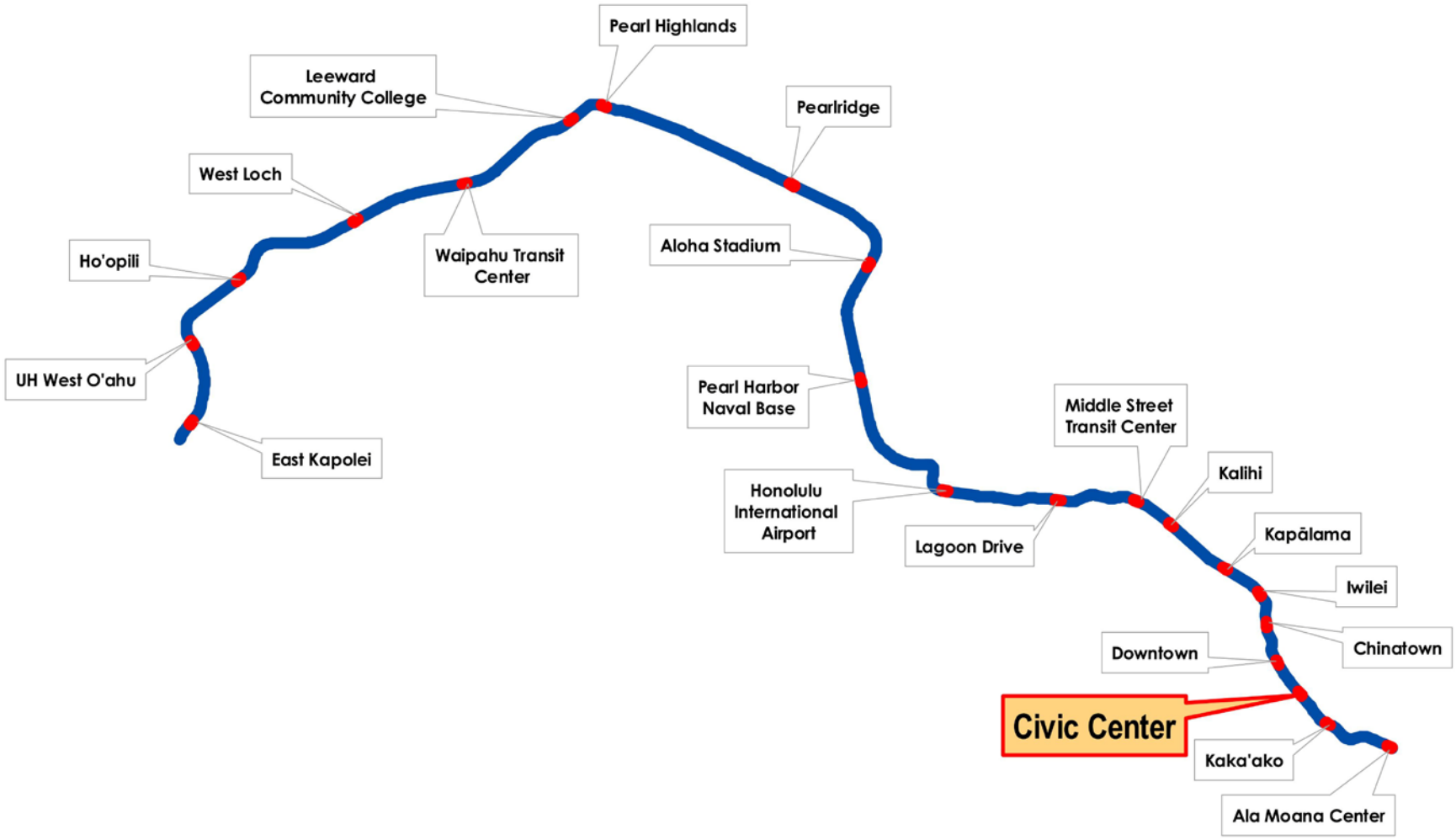
Downtown Station—Pedestrian Access



Downtown Station—Bicycle Access


2030 Bus Service in the Vicinity of Downtown Station
KALIHI-PĀLAMA
SAND ISLAND
MAKIKI/NU'UANU/LOWER
PUNCHBOWL/TANTALUS
DOWNTOWN
MĀNOA
Downtown Station
ALA MOANA/KAKA'AKO
McCULLY/MŌ'ILI'ILI
WAIKĪKĪ
Legend
N
Project
Station Locations
Bus Routes
17 Nu'uanu – Ala Moana – Makiki
19 Waikīkī – Airport
55 Kāne'ohe – Circle Isle
56 Kailua – Kāne'ohe – Honolulu
57/57A Kailua – Sea Life Park – Honolulu
65 Kāne'ohe – Kahalu'u – Honolulu
88A North Shore Express
0 0.25 0.5 1
Miles

Civic Center Station (CC)



Summary

The Civic Center Station will be located on Halekauwila Street between South and Keawe Streets. A single station entrance will be located on the makai side of Halekauwila Street. The station location is in an urban area containing a mix of commercial, government, retail, high-density residential land uses, and surface parking lots. More high-rise condominiums and mixed-use development is expected in this area in the future.

Site Considerations and Access

Station location and nearby land use

- Maps showing station area land use and zoning are included in this report.
- The station will be located in a densely developed, mixed-use urban area that will likely experience continued redevelopment in the future.

Pedestrians and Bicycles

- Maps showing station area pedestrian and bicycle routes are included in this report (see Pedestrian and Bicycle Access Maps).
- Pedestrians and bicyclists will be the dominant mode of access to the station.
- Some sidewalks and streets in the station area are not currently supportive of pedestrians and bicyclists.
- Walk and bike access to the station will need to be supported by improved station plazas, sidewalks, and associated wayfinding/signage.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report on the Transit Access Map.
- Transfers to/from buses will take place at a stop at the corner of Halekauwila and South Streets.
- TheHandi-Van loading area will be located on the makai side of Halekauwila Street.

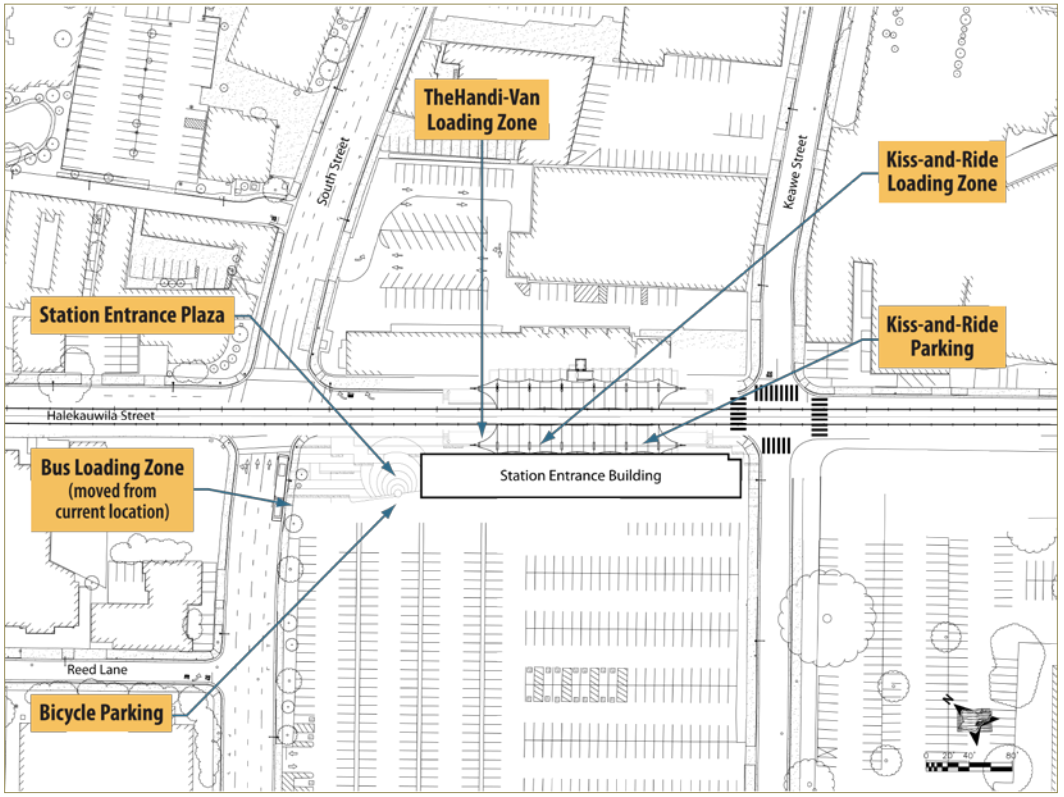
Kiss-and-ride and taxi

- An active loading zone and short-term parking space will be provided for kiss-and-ride patrons.
- A taxi loading zone is not planned at this station.

Park-and-ride

- A park-and-ride facility will not be provided at this station.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Civic Center station will have a medium level of usage with a high projected volume and share of walk/bike trips. The station will have **Side Platforms** accessible from a single entrance on the makai side of Halekauwila Street and connected by an overhead concourse.

TheBus demand will be accommodated at an on-street stop located near the corner of Halekauwila and South Streets. Transit riders will use existing and project-improved sidewalks to reach the station entrance on the makai side of Halekauwila Street. A loading zone for **TheHandi-Van** service will be provided on Halekauwila Street near the station entrance.

To accommodate **Pedestrian/Bicycle** access, some improvements to existing sidewalks will be made. Bicycle parking, in the form of bike racks initially, will be provided. Also, space should be preserved for future demand and more racks or lockers should be added as needed.

A relatively small share of total demand will involve **Kiss-and-Ride**. Loading zones for kiss-and-ride patrons will be provided on the makai side of Halekauwila Street. In addition, a short-term (10-minute) parking space will be provided for those waiting to pick up passengers.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions		**Other Vehicle Parking**	
45' Bus Loading Zone	0	Park-and-ride	0
60' Bus Loading Zone	0	Kiss-and-ride	1
Layover	0	Kiss-and-ride loading/unloading	1
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	0
Eastbound	0	Tour bus/private shuttle	0
Westbound	0	Supervisor	0
Northbound	1	Bicycle parking (opening/2030)	20/40
Southbound	0		

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	150
Alightings	730

Access Mode Daily Trips	
Walk/bike	3,020
Bus	880
Park-and-ride	0
Kiss-and-ride	30
Other	0
Total	3,930

Station Site Design Issues and Follow-up

Create comfortable station entrance plazas

About three-quarters of the demand at this station will involve riders who walk or bike to the rail station. Accordingly, it will be important for the station to have a large pedestrian plaza that provides a safe and comfortable transition between the nearby residential and commercial activities and the single makai-side station entrance. The plaza should be a comfortable pedestrian environment that provides visible and secure spaces for bicycle parking and efficient, easily accessible connections between station entrances, buses, and nearby developments.

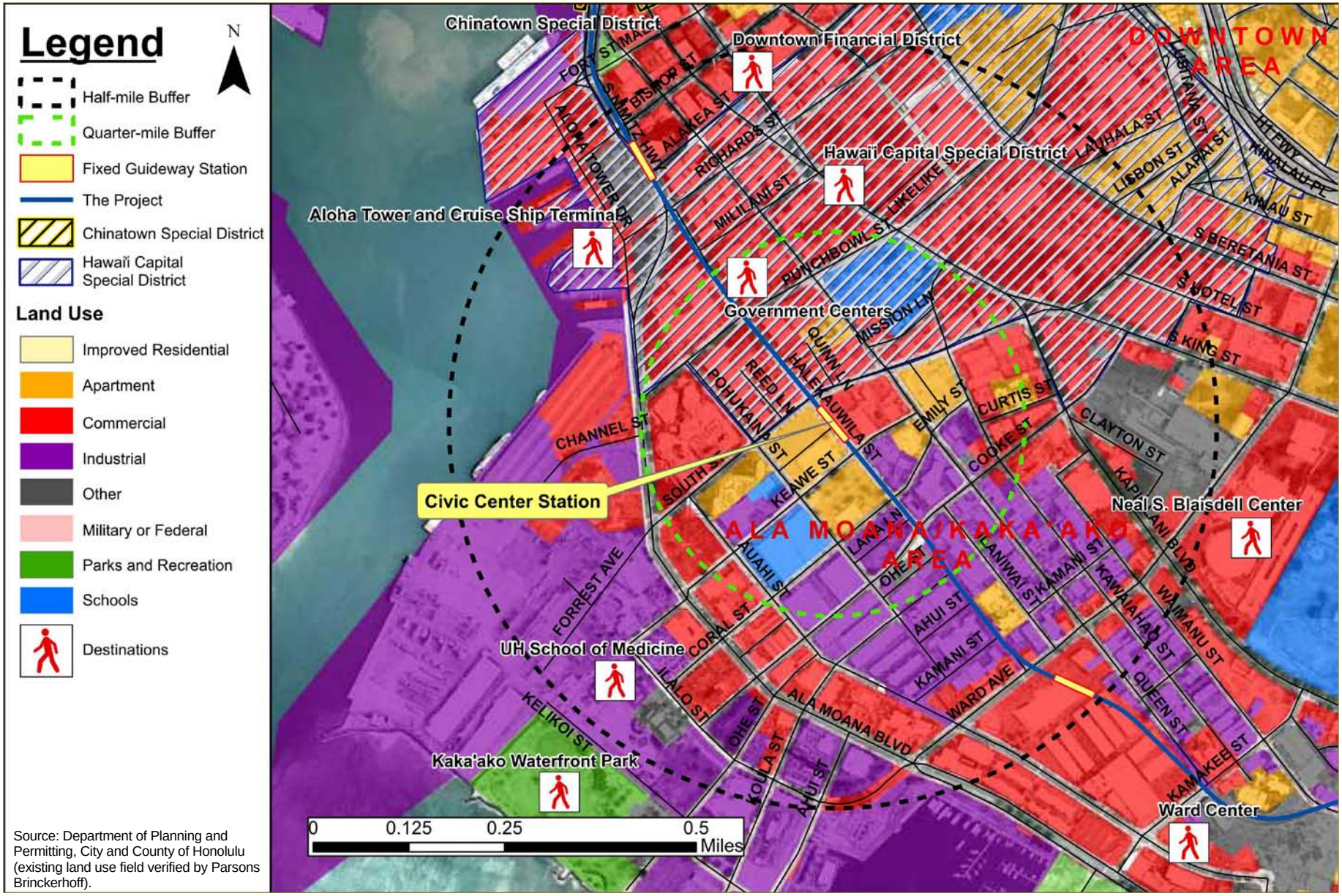
Orient station entrance to serve all users

The single makai-side entrance will serve bus transit and TheHandi-Van passengers coming directly from Halekauwila and South Streets, but it will also serve patrons who walk or bike from various locations in the neighborhood, including mauka of the station. The station entrance should be designed and oriented to accommodate a variety of patrons. Halekauwila Street should be designed to be comfortable for pedestrians and bicyclists.

Provide clear connections between station elements

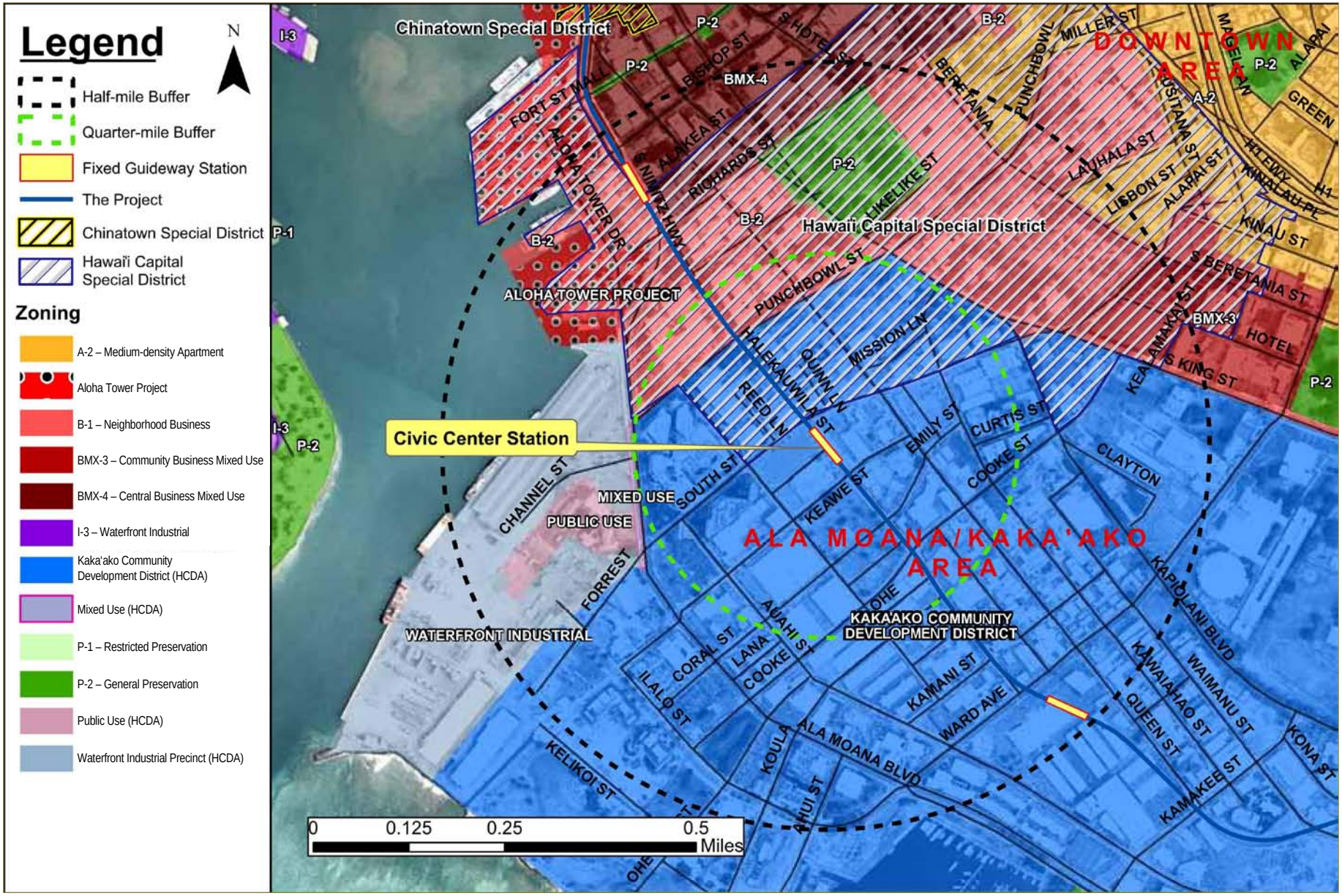
Safe and convenient pedestrian connections between various station elements will be needed, with a clear line of sight between the station entrance and other elements, such as bus stops and sidewalks. There should be recognition of potentially large pedestrian volumes at the station entrance.

Civic Center Station—Existing Land Use

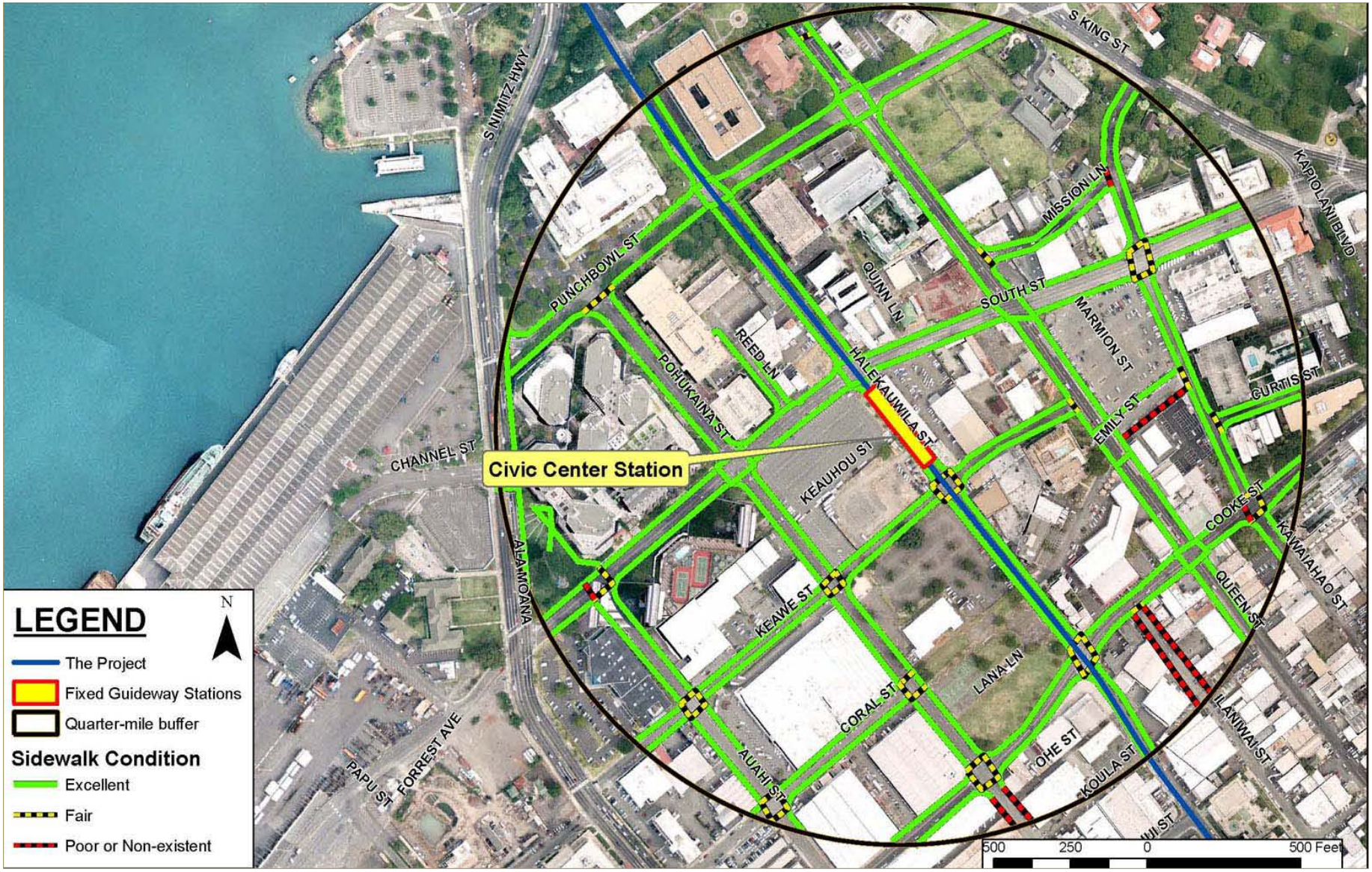


Source: Department of Planning and Permitting, City and County of Honolulu (existing land use field verified by Parsons Brinckerhoff).

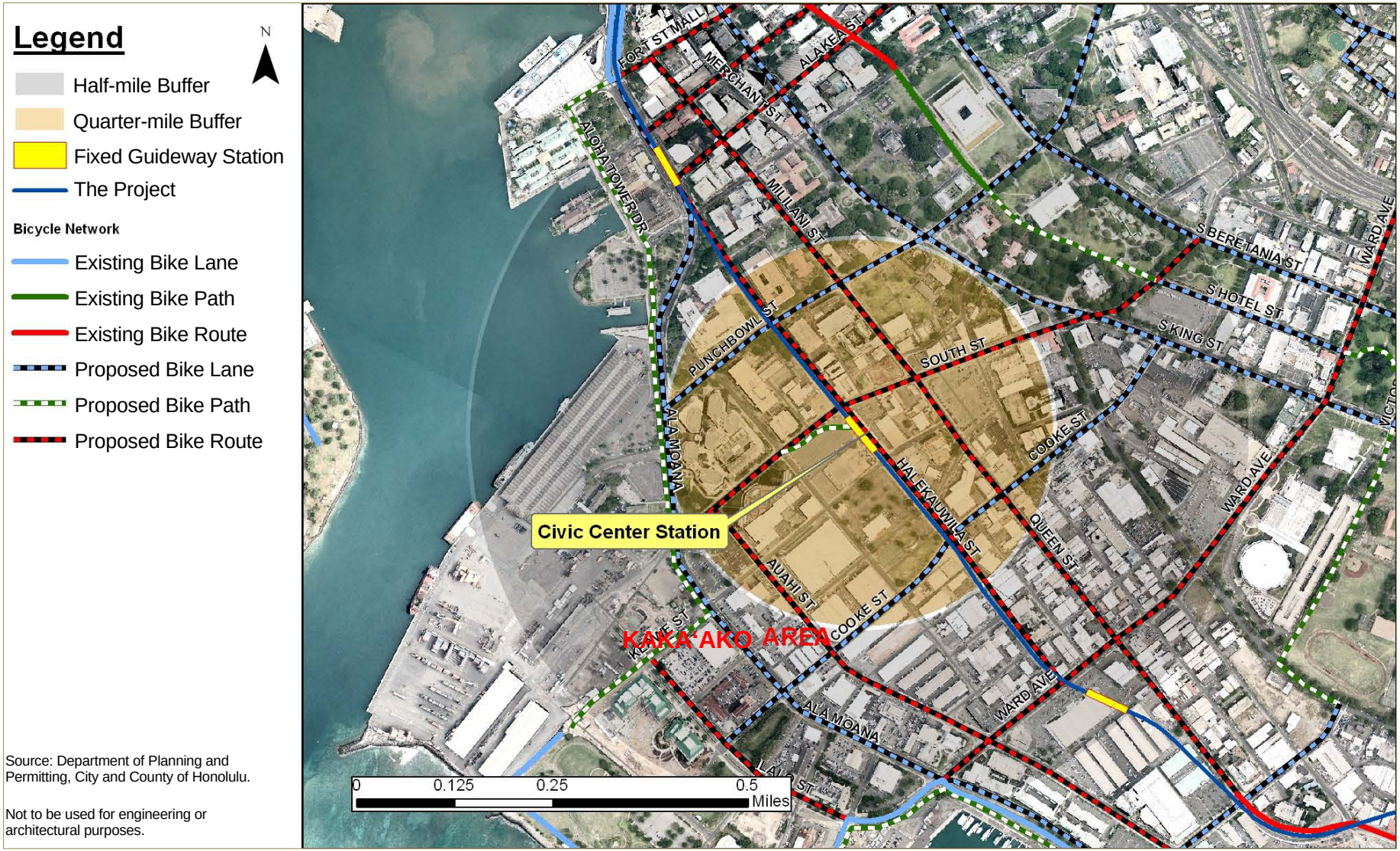
Civic Center Station—Existing Zoning

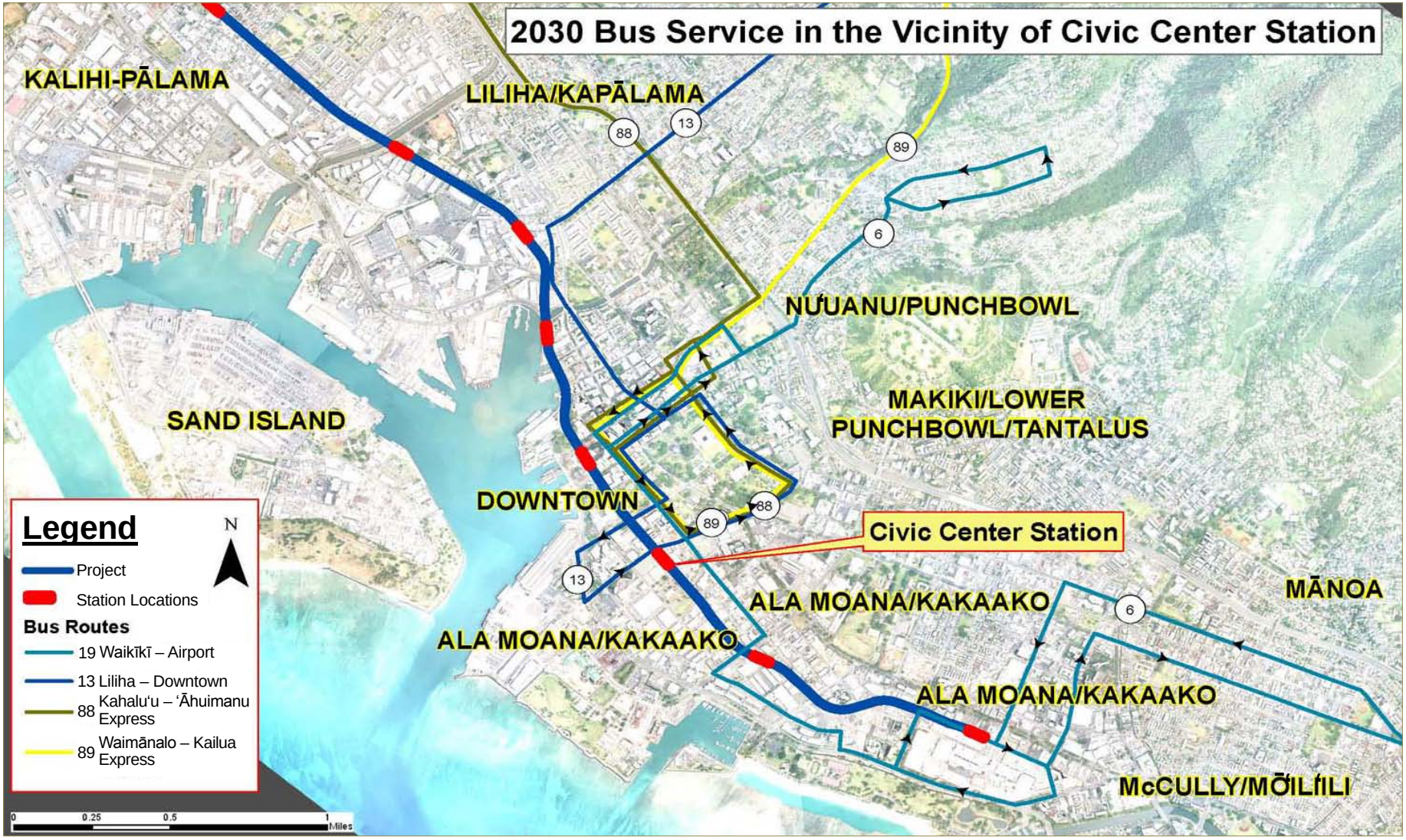


Civic Center Station—Pedestrian Access

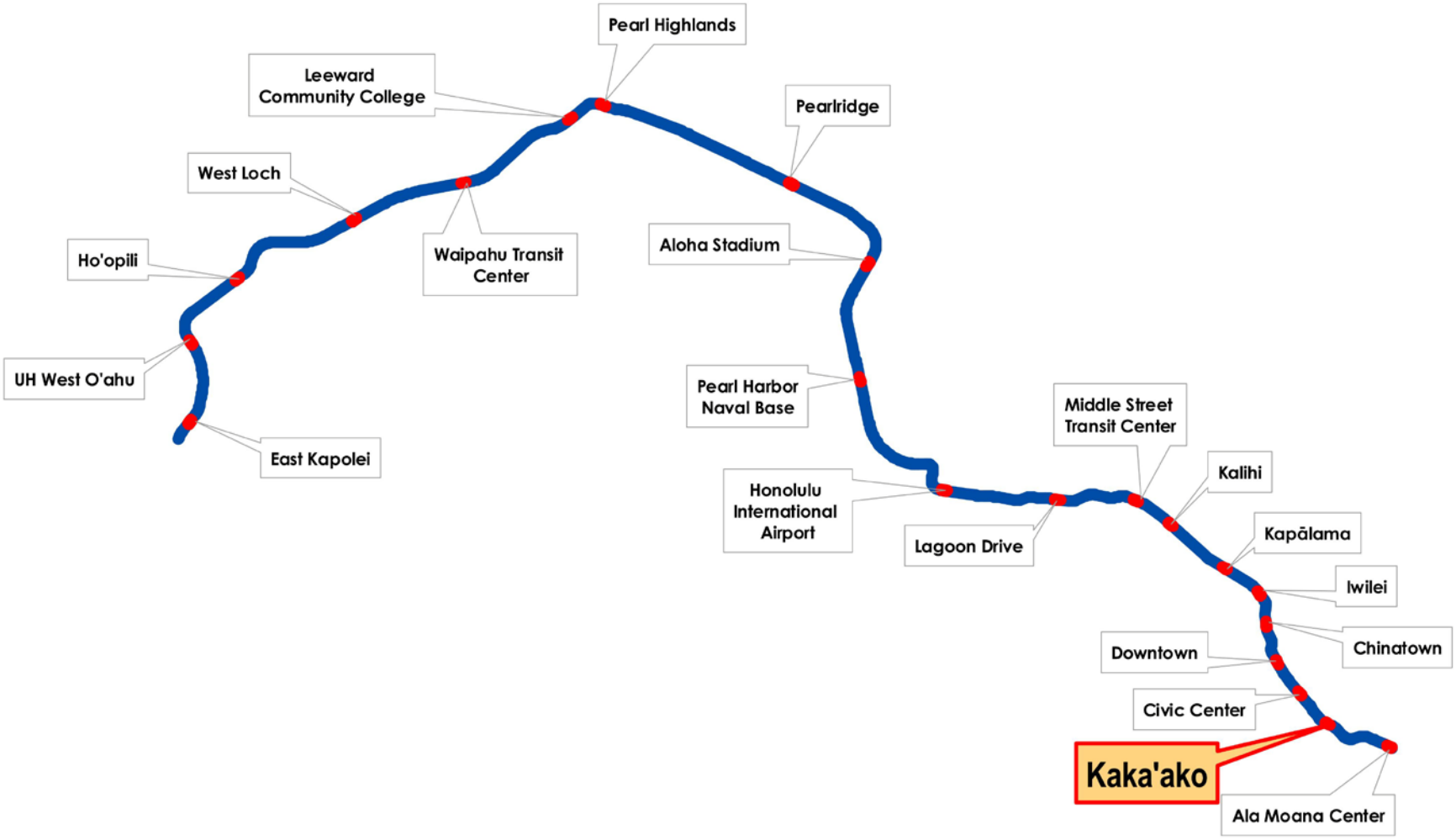


Civic Center Station—Bicycle Access




2030 Bus Service in the Vicinity of Civic Center Station
KALIHI-PĀLAMA
LILIHA/KAPĀLAMA
NUʻUANU/PUNCHBOWL
MAKIKI/LOWER
PUNCHBOWL/TANTALUS
SAND ISLAND
DOWNTOWN
Civic Center Station
ALA MOANA/KAKAAKO
ALA MOANA/KAKAAKO
ALA MOANA/KAKAAKO
MĀNOA
McCULLY/MŌILIʻILI
88
13
89
6
Legend
N
Project
Station Locations
Bus Routes
19 Waikīkī – Airport
13 Liliha – Downtown
88 Kahaluʻu – ʻĀhuimanu Express
89 Waimānalo – Kailua Express
0
0.25
0.5
1
Miles

Kaka‘ako Station (KK)



Summary

Kaka'ako Station will be located on Ward Avenue near Halekauwila Street. A single entrance connected directly to boarding platforms will be located on the 'Ewa side of the station, below the guideway.

Site Considerations and Access

Station location and nearby land use

- Maps showing station area land use and zoning are included in this report.
- The station location is an urban area containing a mix of large retail complexes, small industrial activities, and high-density housing.
- Changes to land use and density are expected in the future, including new transit-oriented development that could be coordinated with implementation of the Kaka'ako Station.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown on the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- Pedestrians and bicyclists will be the dominant mode of access to the station.
- In some parts of the station area, current sidewalk conditions are not supportive of pedestrians and bicyclists.
- As the area redevelops and generates more pedestrian traffic, sidewalk and streetscape conditions will need to be improved.
- A new crosswalk will be added on Ward Avenue at Halekauwila Street to enhance access.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report and shown in the Transit Access Map.
- Transfers to/from TheBus will occur at existing bus stops on Ward Avenue.
- TheHandi-Van loading area will be located on Ward Avenue or off-street near the station entrance.

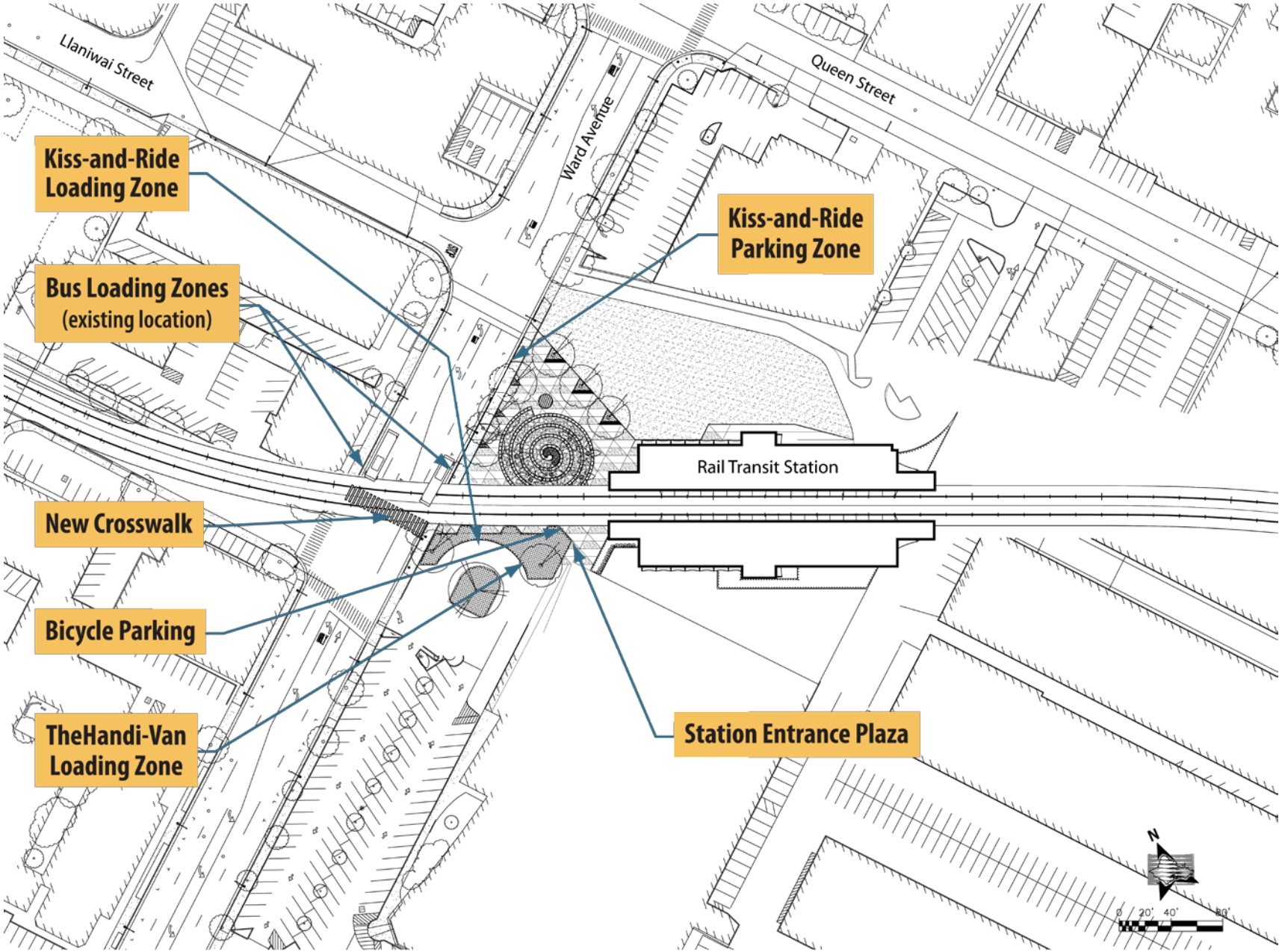
Kiss-and-ride and taxi

- Short-term parking and a loading zone for kiss-and-ride patrons will be provided.
- A taxi loading zone is not planned at this station.

Park-and-ride

- A park-and-ride facility will not be provided at this station.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Kaka'ako station will have a medium level of usage with a high volume and share of walk/bike trips. The station will have **Side Platforms** accessible from a single entrance located below the guideway. Stairs and elevators will connect to each platform. The main station entrance will open to a large plaza adjacent to Ward Avenue.

TheBus demand will be accommodated at existing on-street bus stops located on Ward Avenue. These bus stops are close to the future station entrance to be located on the Koko Head side of Ward Avenue. A loading zone for **TheHandi-Van** will be located near the station entrance.

To accommodate **Pedestrian/Bicycle** access, some improvements to existing sidewalks will be made. A new mauka crosswalk will be added at the intersection of Ward Avenue and Halekauwila Street. Bike racks will be provided at the station entrance. Also, space should be preserved for future demand and more racks or lockers should be added as needed.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions		**Other Vehicle Parking**	
45' Bus Loading Zone	0	Park-and-ride	0
60' Bus Loading Zone	0	Kiss-and-ride	1
Layover	0	Kiss-and-ride loading/unloading	1
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	0
Eastbound	0	Tour bus/private shuttle	0
Westbound	0	Supervisor	0
Northbound	1	Bicycle parking (opening/2030)	20/30
Southbound	1		

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	110
Alightings	460

Access Mode Daily Trips	
Walk/bike	2,650
Bus	650
Park-and-ride	0
Kiss-and-ride	20
Other	0
Total	3,320

Station Site Design Issues and Challenges

Create comfortable station entrance plazas

Since most riders will walk or bike to the station, it will be important to have a large pedestrian plaza that provides a safe and comfortable transition between the station entrance and nearby developments. The station entrance plaza should provide a comfortable pedestrian environment that includes visible and secure spaces for bicycle parking and efficient, easily accessible connections between the station entrance, bus stops, and adjacent properties. The landscaped plaza will become an attractive gathering place as the surrounding properties undergo redevelopment. In order to create seamless connections between transit and land use, coordination between station entrance plazas and existing and future development in the Kaka'ako District should be greatly encouraged.

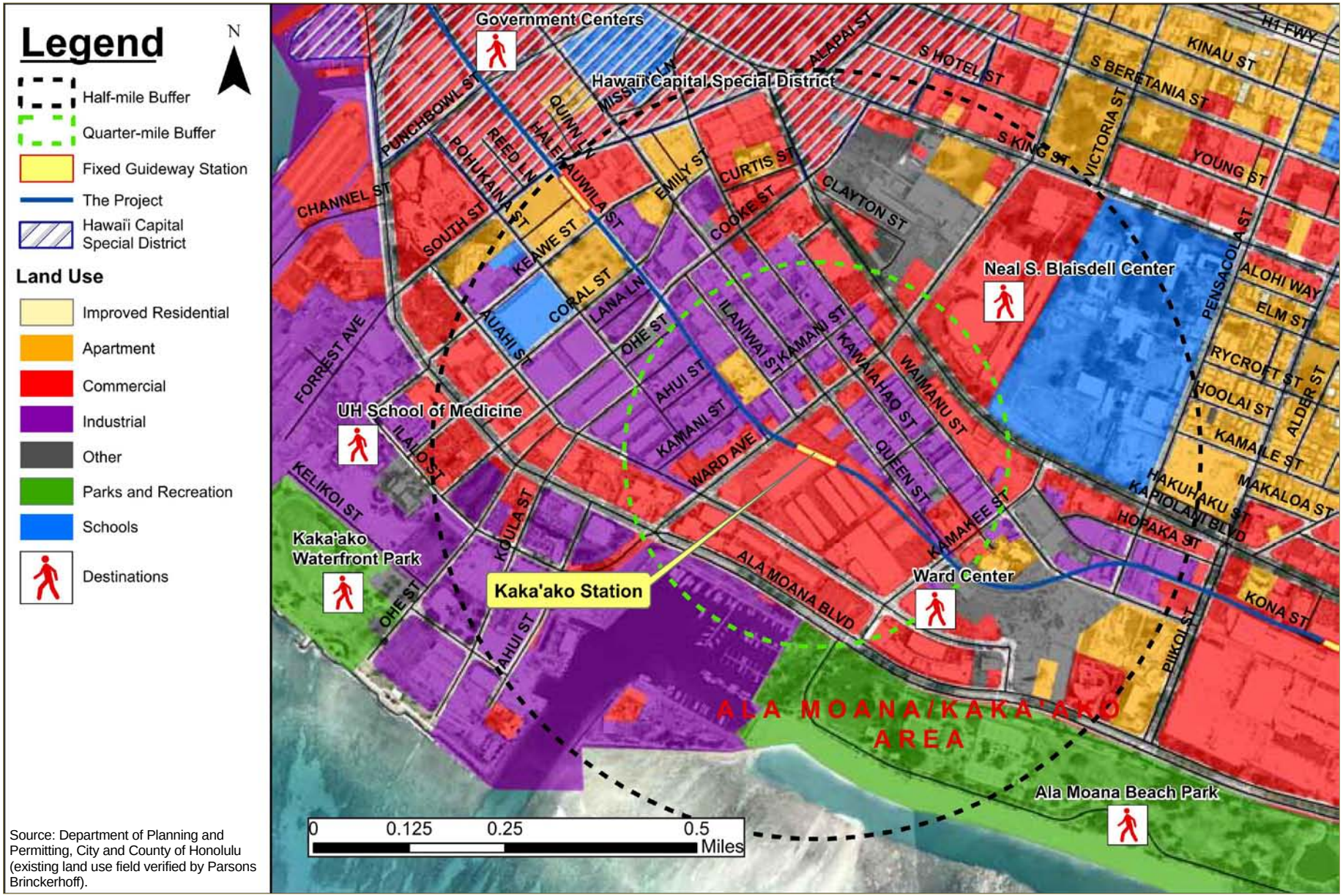
Orient station entrance to serve all users

The station entrance will serve patrons coming from Halekauwila Street and Ward Avenue, but it will also serve kiss-and-ride and TheHandi-Van patrons coming from Ward Avenue. The station entrance should be designed and oriented to accommodate all potential users.

Provide clear connections between station elements

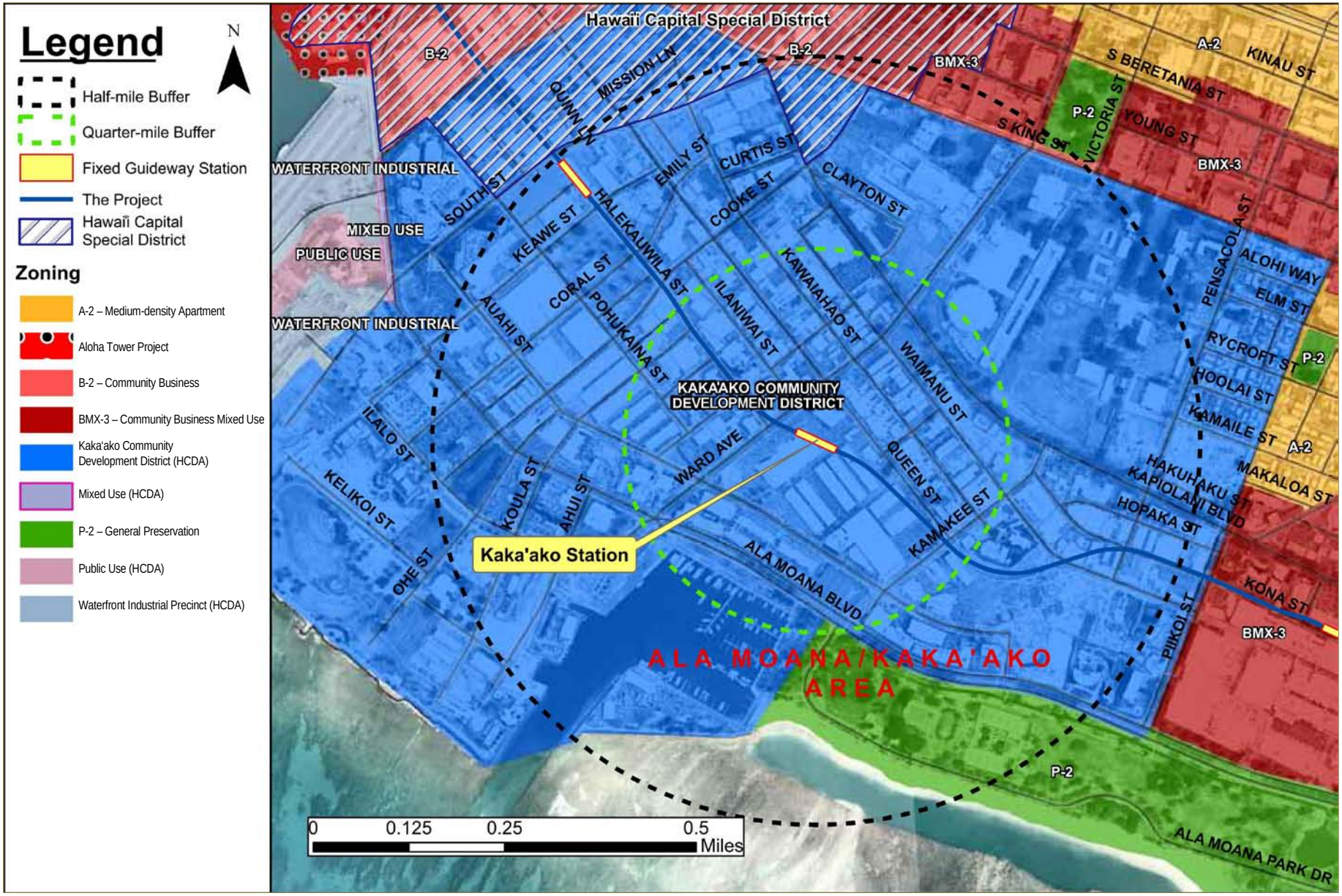
Safe and convenient pedestrian connections between various station elements will be needed, with a clear line of sight between the station entrance and other elements, such as bus stops and sidewalks. There should be recognition of potentially large pedestrian volumes at the station entrance on Ward Avenue.

Kaka'ako Station—Existing Land Use

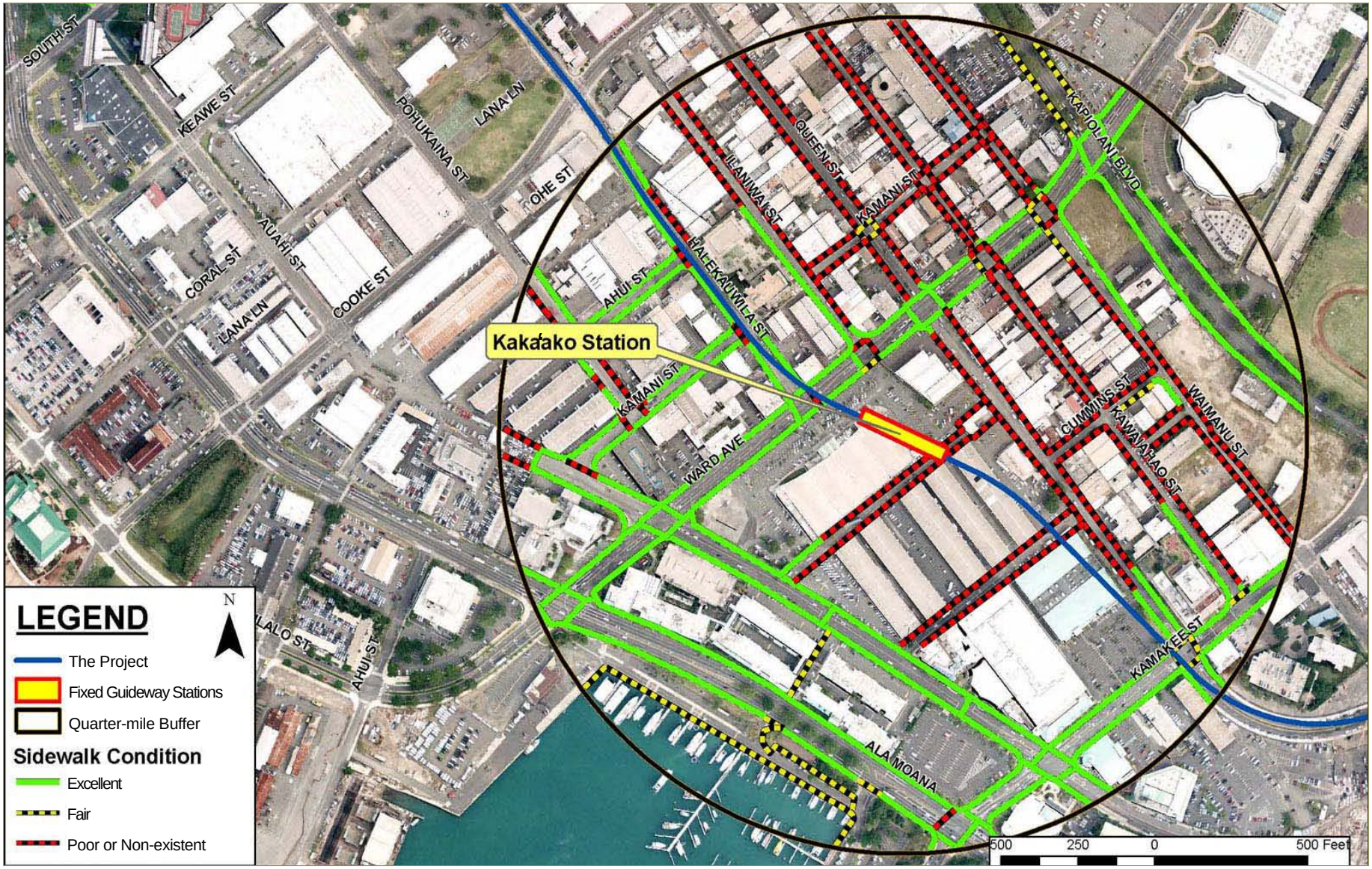


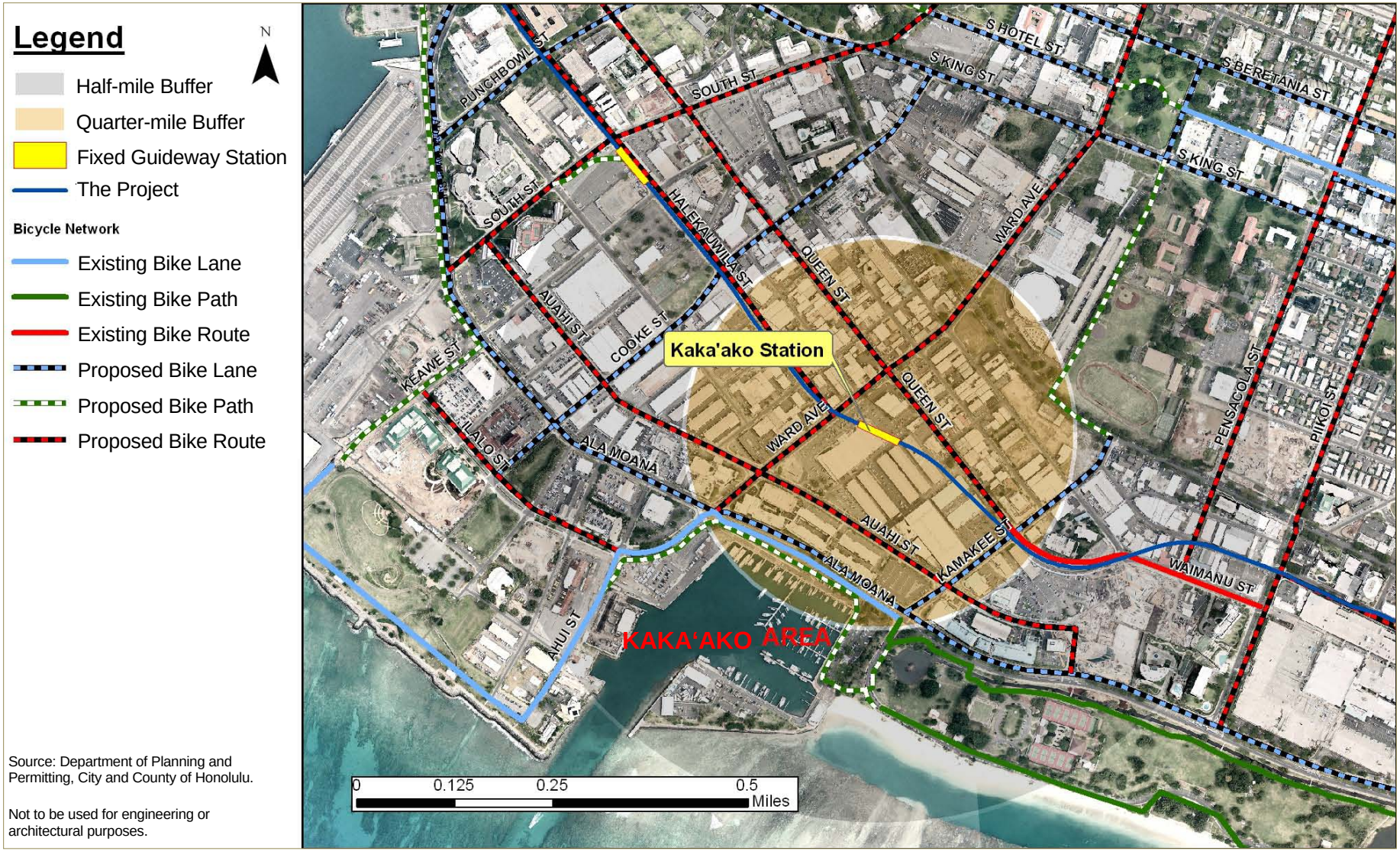
Source: Department of Planning and Permitting, City and County of Honolulu (existing land use field verified by Parsons Brinckerhoff).

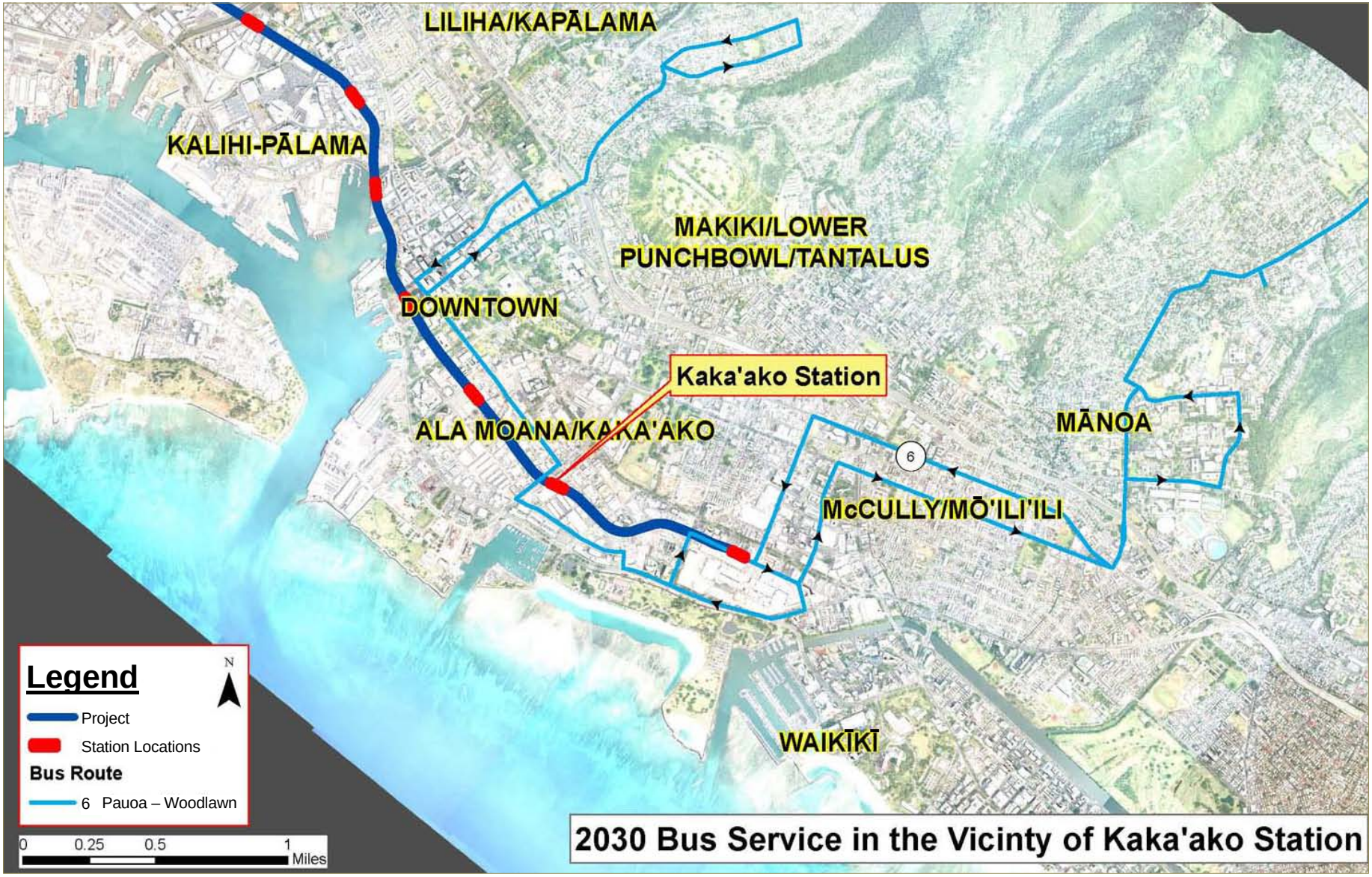
Kaka‘ako Station—Existing Zoning



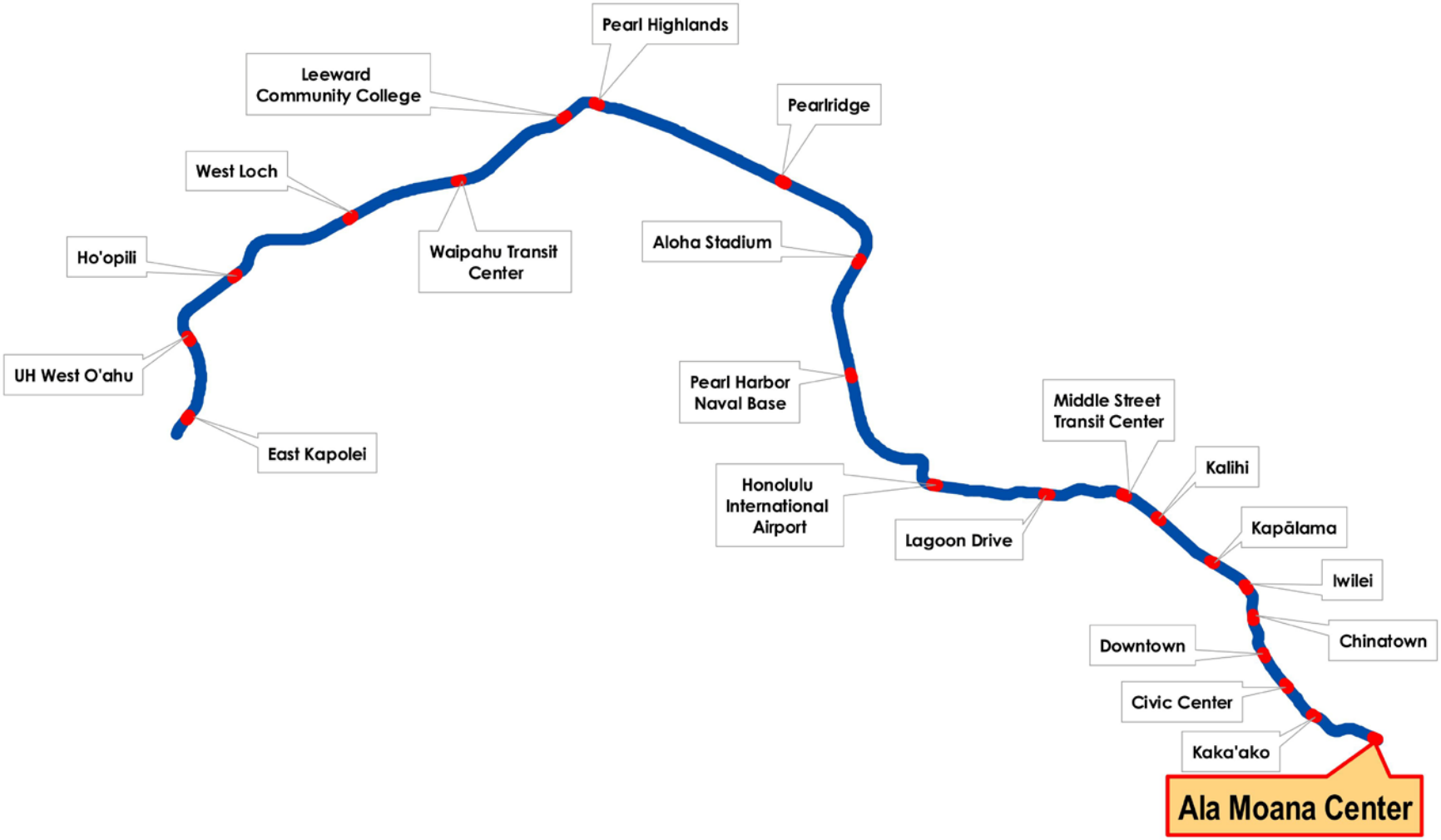
Kaka'ako Station—Pedestrian Access




Legend
N
Half-mile Buffer
Quarter-mile Buffer
Fixed Guideway Station
The Project
Bicycle Network
Existing Bike Lane
Existing Bike Path
Existing Bike Route
Proposed Bike Lane
Proposed Bike Path
Proposed Bike Route
Source: Department of Planning and Permitting, City and County of Honolulu.
Not to be used for engineering or architectural purposes.
Kaka'ako Station
KAKA'AKO AREA
PUNCHBOWL ST
SOUTH ST
S HOTEL ST
S KING ST
S BERETANIA ST
HALEKAUWILA ST
QUEEN ST
WARD AVE
AUAHI ST
COOKE ST
KEAWE ST
ILALO ST
ALA MOANA
KAMAKEE ST
WAIMANU ST
PENSACOLA ST
PIIKOI ST
AHUI ST
0
0.125
0.25
0.5
Miles


LILIHA/KAPĀLAMA
KALIHI-PĀLAMA
MAKIKI/LOWER
PUNCHBOWL/TANTALUS
DOWNTOWN
Kaka'ako Station
ALA MOANA/KAKA'AKO
MĀNOA
6
McCULLY/MŌ'ILI'ILI
WAIKĪKĪ
Legend
N
Project
Station Locations
Bus Route
6 Pauoa – Woodlawn
0 0.25 0.5 1
Miles
2030 Bus Service in the Vicinty of Kaka'ako Station

Ala Moana Center Station (AM)



Summary

Ala Moana Center Station will be located on Kona Street on the mauka side of Ala Moana Center. The station will serve a major regional shopping complex as well as nearby high-density housing, commercial, and hotel developments in the area.

Site Considerations and Access

Station location and nearby land uses

- Maps showing station area land use and zoning are included in this report.
- The station will be in an urban area immediately adjacent to the largest retail complex in Hawai‘i.
- The station area contains retail, commercial, and high-density residential development as well as a recreational area makai of the station.
- Access to the station will be through a single entrance integrated into the shopping center parking garage.

Pedestrians and bicycles

- Station area pedestrian and bike access is shown on the station area site plan to the right and on the Pedestrian and Bicycle Access Maps on the following pages.
- In addition to Ala Moana Center, pedestrian and bike access will also be coming from mauka and makai of the station, including travel generated by employment and residential developments near Kapi‘olani Boulevard and recreational areas makai of Ala Moana Boulevard.
- At the location where bus stops interface with the station entrance, capacity of sidewalks should be expanded to meet expected pedestrian volumes.

TheBus and TheHandi-Van

- A map showing bus access in the station area is included in this report (see Transit Access Map).
- Extensive local bus service is provided to Ala Moana Center; however, bus stop locations are scattered throughout the station area. Substantial transfers currently take place in this area.
- Transfers to/from buses will take place at on-street bus stops located in the station area and include Kona and Pi‘ikoi Streets as well as Kapi‘olani and Ala Moana Boulevards.
- TheHandi-Van loading areas will be located on Kona Street.

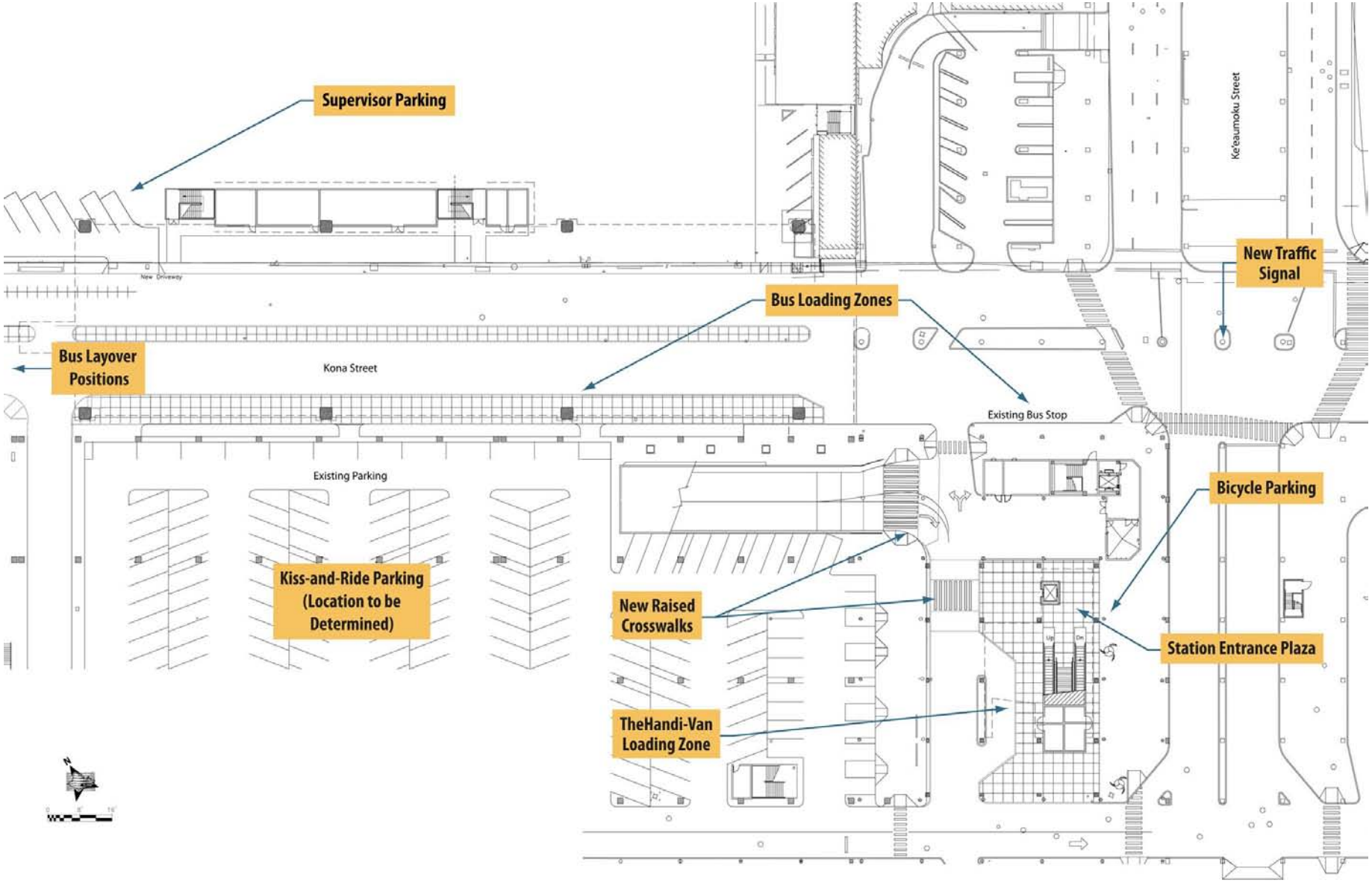
Kiss-and-ride and taxi

- Short-term parking for kiss-and-ride patrons will be provided near the station entrance. Coordination with the shopping center will be required to determine the final location.
- A taxi loading zone currently exists along the mauka side of Ala Moana Center; additional spaces for taxi parking will not be provided as part of the Project.

Park-and-ride

- A park-and-ride facility will not be provided at this station.

Station Area Site Plan



Station Access Demand and Site Requirements

The adjacent table provides an overview of projected ridership at the station, including estimated breakdown by mode. Also shown are site requirements for various access modes.

Ala Moana Center will be an extremely high-use station (the busiest of the system) with a very high volume of bus transfers and walk/bike trips. The station will have a **Center Platform** accessible from a single entrance located within the Ala Moana Shopping Center.

TheBus will be the primary mode of access with several bus loading zones in the station area. The station entrance will be close to the existing bus zones on Kona Street. Other bus stops will be located in the station area, which will require wayfinding to the station entrance.

A **Park-and-Ride** facility will not be provided at this station.

To accommodate **Pedestrian/Bicycle** access, raised crosswalks will be added within the Ala Moana Center parking lot near the station to slow traffic and provide safe crossings for pedestrians transferring between the station entrance and bus stops. Further, a traffic signal will be added at the corner of Kona Street and Ke'eaumoku Street to enhance pedestrian access to the station. Bike racks should be provided near the station entrance and space should be preserved for future demand. More racks or lockers should be added as needed.

Site Requirements in Station Area*			
***On-Site** (off-street)*			
Bus Positions [1]		**Other Vehicle Parking**	
Loading	0	Park-and-ride	0
Layover	4	Kiss-and-ride	25
		Kiss-and-ride loading/unloading	3
***Off-Site** (on-street)*		TheHandi-Van	1
Bus Positions		Taxi	0
Eastbound	5	Tour bus/private shuttle	1
Westbound	1	Supervisor	1
Northbound	0	Bicycle parking (opening/2030)	20/220
Southbound	0		

*Refer to *HHCTCP Design Criteria* Chapter 6 – Civil and Chapter 10 – Architecture for more specific site requirements and guidelines

[1] All bus positions will be on Kona Street.

Station Ridership and Mode of Access	
A.M. Peak Hour Demand	
Boardings	1,110
Alightings	4,240

Access Mode Daily Trips	
Walk/bike	3,680
Bus	17,790
Park-and-ride	0
Kiss-and-ride	890
Other	250
Total	22,610

Station Site Design Issues and Follow-up

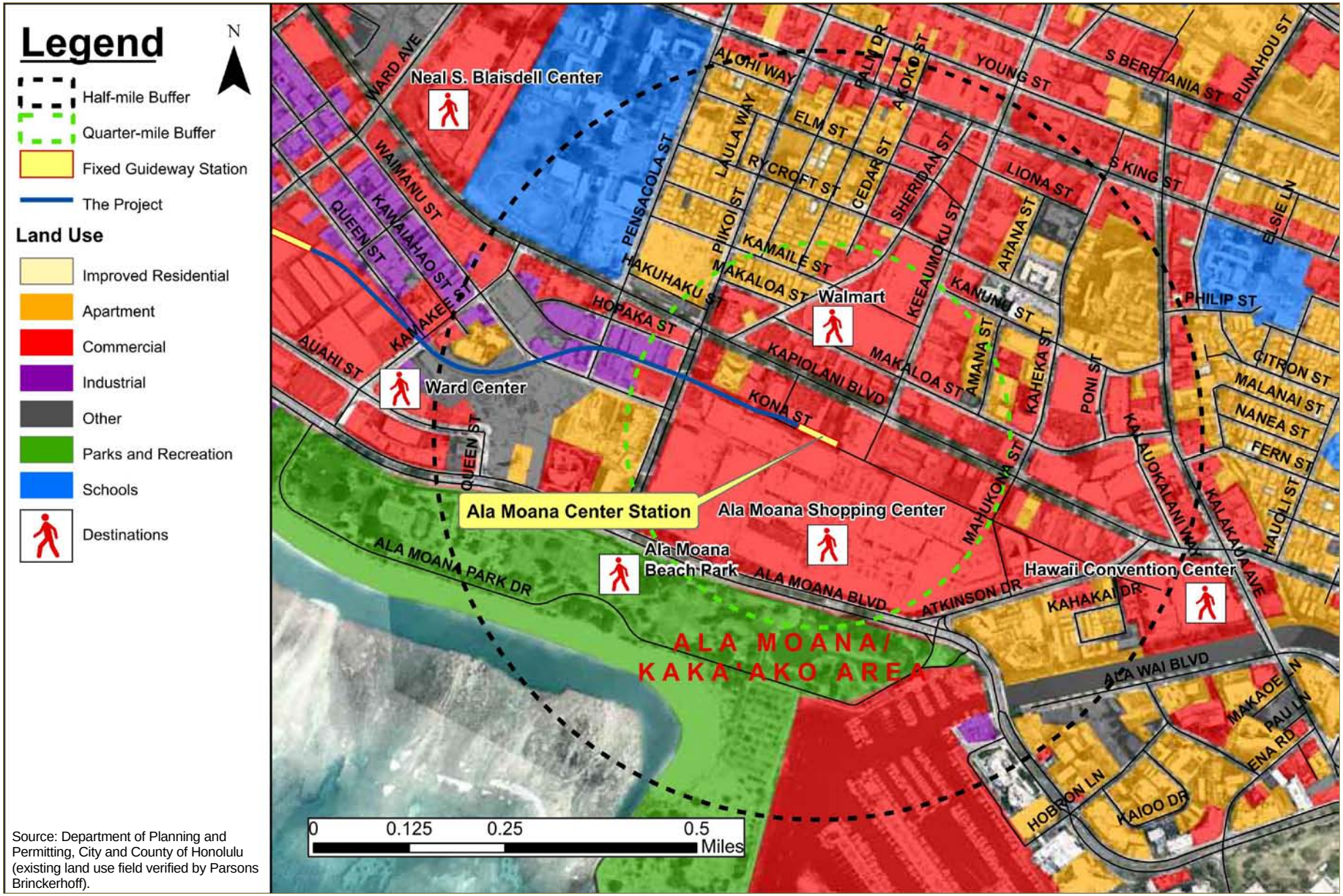
Create comfortable station entrance plaza

About 80 percent of the demand at this station will involve riders transferring between rail and bus services. It will be important for the station to have a large, well-designed pedestrian plaza that provides a safe and comfortable transition between bus stops and the station entrance. The station entrance plaza should provide a comfortable pedestrian environment, including visible and secure spaces for bicycle parking, and efficient, easily accessible connections between the station entrances, buses, and nearby developments. The station entrance should be designed and oriented to accommodate all potential users.

Provide clear connections between station elements

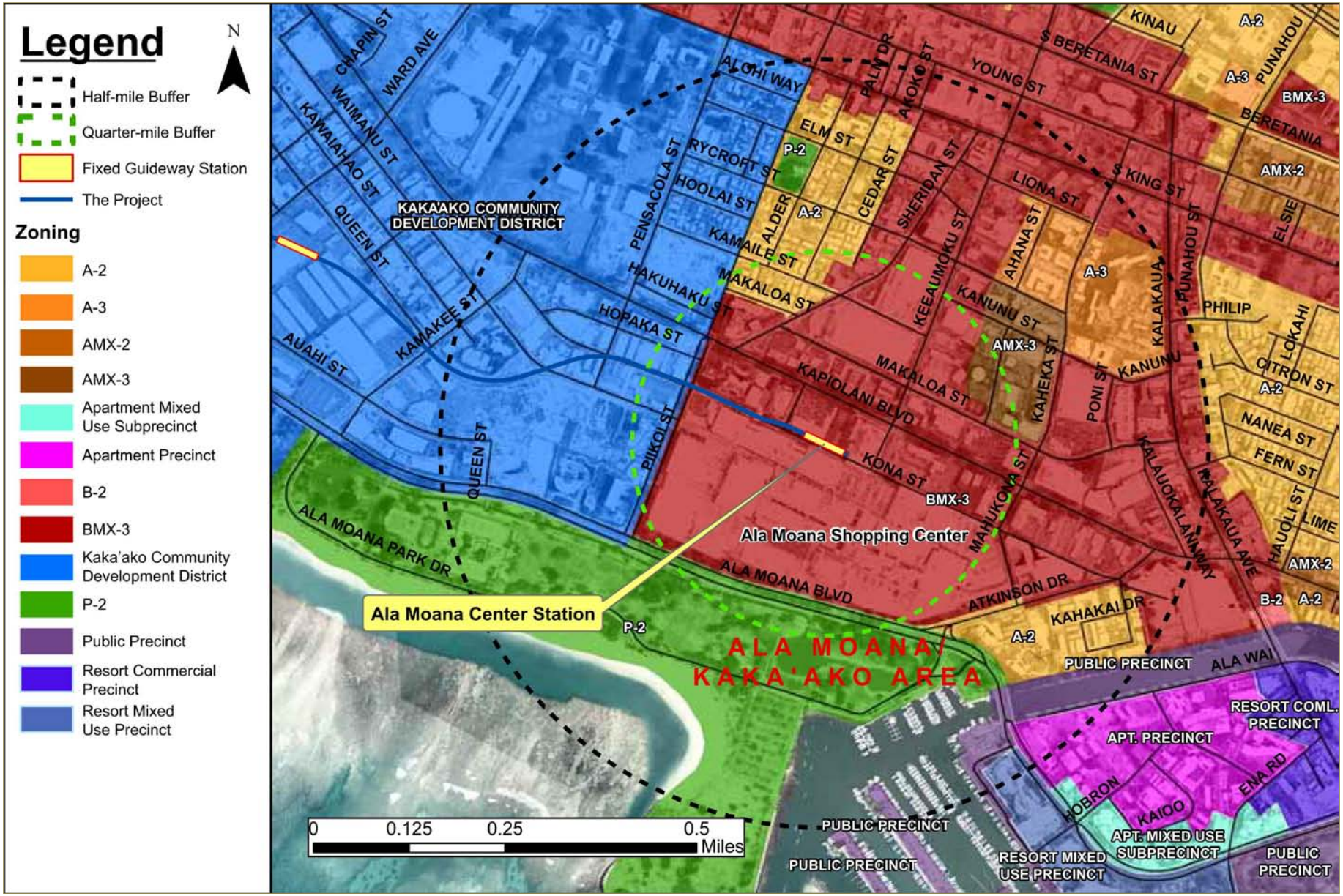
Safe and convenient pedestrian connections between various station elements will be needed, with a clear line of sight between the station entrance and other elements such as bus stops and sidewalks. There should be recognition of potentially large pedestrian volumes in the vicinity of existing bus stops and near the station entrance.

Ala Moana Center Station—Existing Land Use

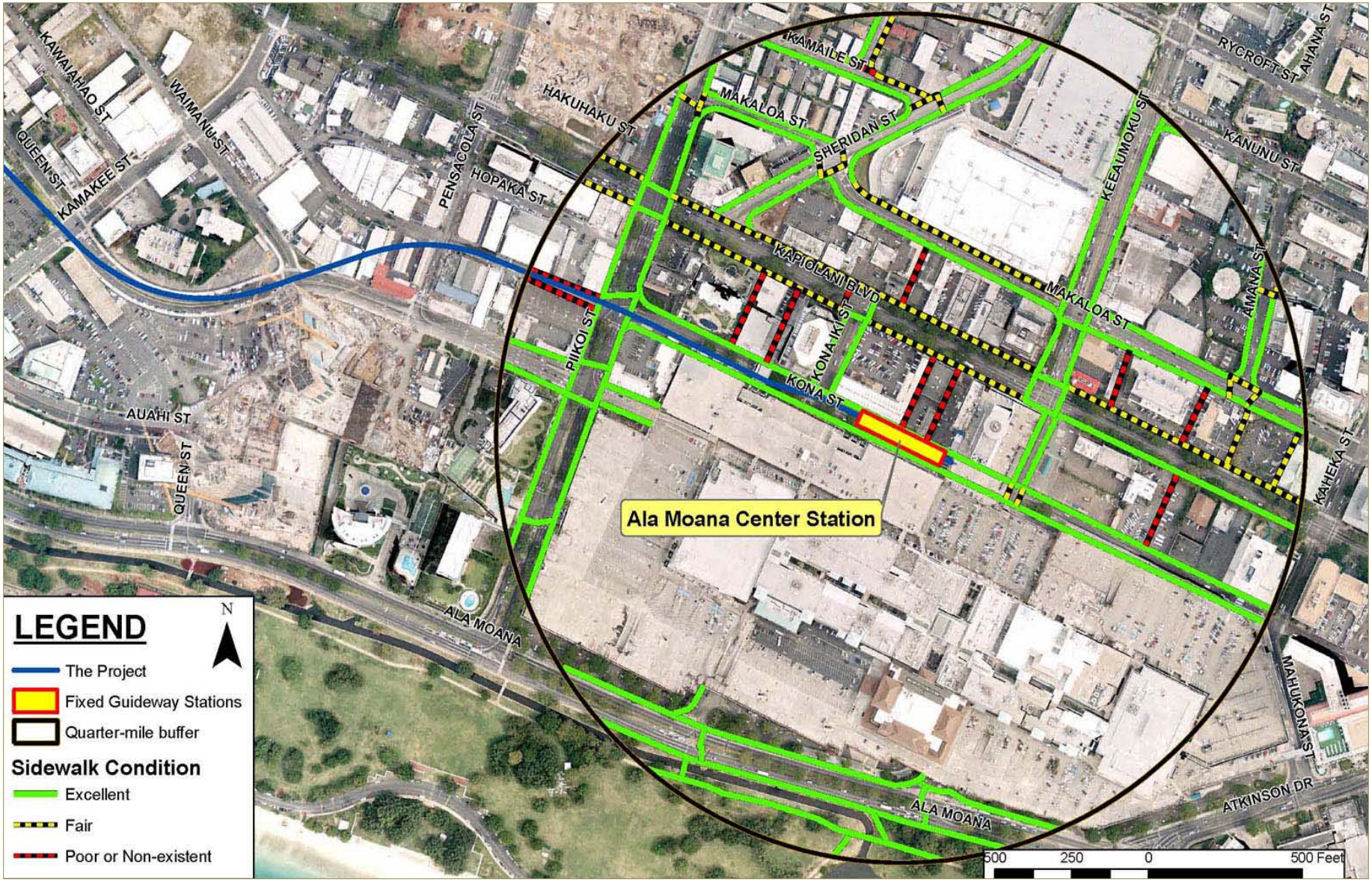


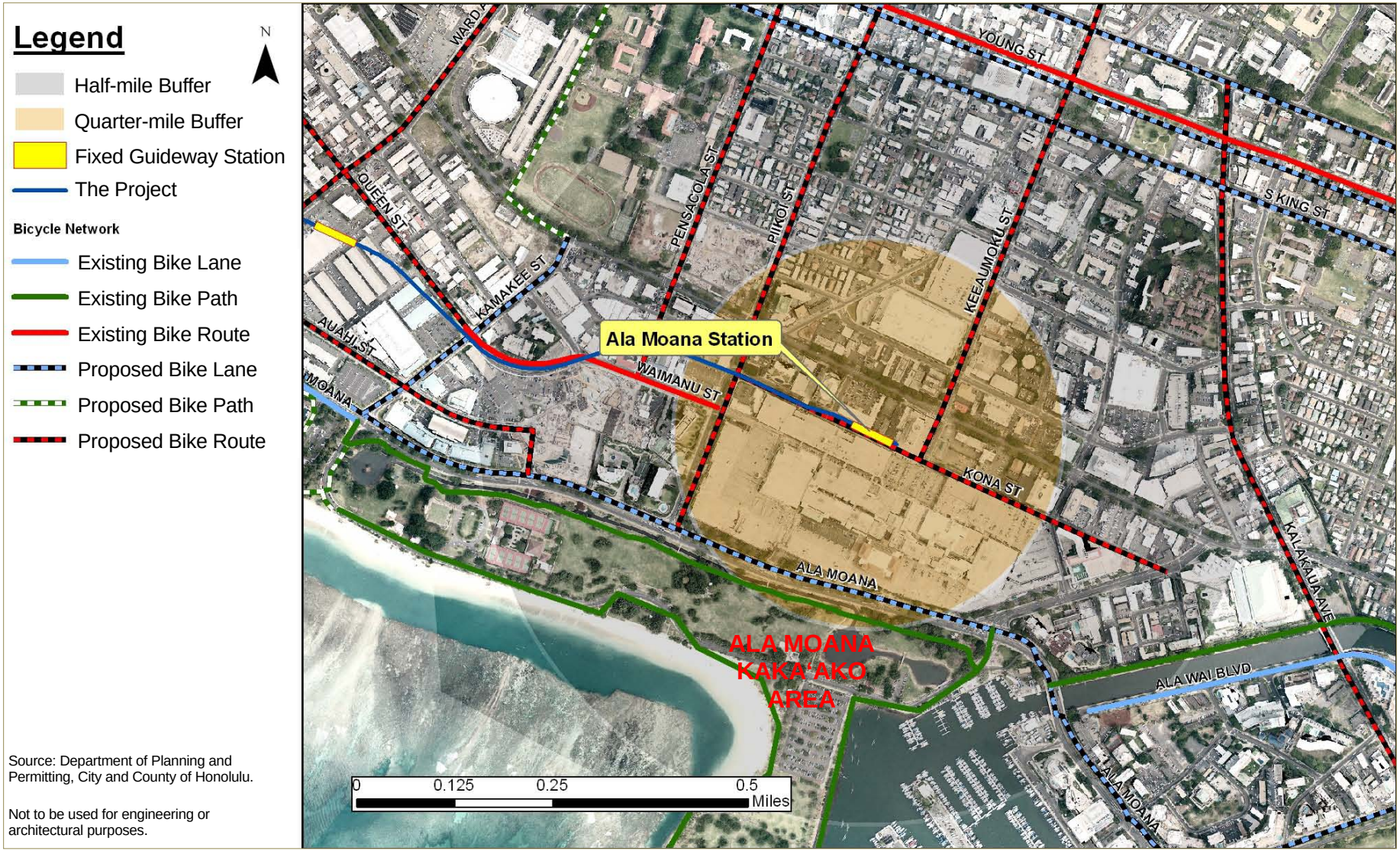
Source: Department of Planning and Permitting, City and County of Honolulu (existing land use field verified by Parsons Brinckerhoff).

Ala Moana Center Station—Existing Zoning



Ala Moana Center Station—Pedestrian Access




Legend
N
Half-mile Buffer
Quarter-mile Buffer
Fixed Guideway Station
The Project
Bicycle Network
Existing Bike Lane
Existing Bike Path
Existing Bike Route
Proposed Bike Lane
Proposed Bike Path
Proposed Bike Route
Source: Department of Planning and Permitting, City and County of Honolulu.
Not to be used for engineering or architectural purposes.
Ala Moana Station
ALA MOANA KAKA'AKO AREA
YOUNG ST
S KING ST
QUEEN ST
KAMAKEE ST
PENSACOLA ST
PIIKOI ST
KEEAUMOKU ST
AUAHI ST
WAIMANU ST
KONA ST
ALA MOANA
KALAKAUA AVE
ALA WAI BLVD
0
0.125
0.25
0.5
Miles

Ala Moana Center Station—Transit Access